

National Marine Atlas

Non-fisheries Uses In Australia's Marine Jurisdiction

Healthy
for the
oceans:



wisely
healthy
in the

NATIONAL OCEANS OFFICE



Australian Government
National Oceans Office

TITLE PAGE

National Marine Atlas - Non-Fisheries Uses in Australia's Marine Jurisdiction

Copyright © National Oceans Office, 2004

Disclaimer

This Atlas was prepared for the National Oceans Office by Spatial Vision, and draws on information provided by a large number of government agencies and non-government organisations. The views expressed in this document are not necessarily those of the Commonwealth. The Commonwealth does not accept responsibility for the contents of this document.

Sourcing

Copies of this document in digital and hard copy format are available from:

National Oceans Office
Level 1, 80 Elizabeth St, Hobart
GPO Box 2139 Hobart TAS 7001
Tel: +61 3 6221 5000 Fax: +61 3 6221 5050
www.oceans.gov.au

For further information about this document, contact the Public Affairs Officer,
Tel: +61 3 6221 5000

Reproduction

Information in this report may be reproduced in whole or in part for study or training purposes, subject to the inclusion of acknowledgement of the source and provided no commercial usage or sale of the material occurs. Reproduction for purposes other than those given above requires written permission from the National Oceans Office. Requests for permission should be addressed to the Public Affairs Officer, National Oceans Office, GPO Box 2139, Hobart TAS 7001.

Credits

Design: Spatial Vision

Prepress: GPD Graphics

Printing: Work & Turner

Photo Credits:

Cover; bow of ship, oil platform © CSIRO; whale © NOAA

Inside pages; whale © NOAA, bottom right inset throughout; AUSCAN voyage © NOO, page 1; AUSCAN voyage © NOO, page 2; AUSCAN voyage © NOO, stone crab © NORFANZ, page 3; boat in dock © NOO, wave © Microsoft, deep sea fish © NORFANZ, page 4; river, Gulf of Carpentaria © NOO, page 6; lighthouse at Eddystone Point © Alicja Mosbauer, page 7; windsurfer © Microsoft, frigate © Department of Defence, page 8; deep sea fish © NORFANZ, page 9; AUSCAN voyage © NOO, page 11; AUSCAN voyage © NOO, page 71; AUSCAN voyage © NOO, page 72;

Published by the National Oceans Office.

State Library Reference

National Marine Atlas

Non-Fisheries Uses in Australia's Marine Jurisdiction

ISBN 1-877043-34-6

ACKNOWLEDGEMENTS

A large number of organisations have contributed information to assist in the preparation of this atlas. Chapter 7 provides a list of organisations identified as the custodians of the data obtained and presented in this atlas. Individual atlas maps identify the source of data presented on an individual map basis.





FOREWORD

It is a little known fact that Australia has the largest area of ocean jurisdiction of any country on earth.

This vast marine territory offers great opportunities as well as important responsibilities. If we are to manage our rich resources effectively and sustainably into the future, we need an understanding of how we use them today.

The National Marine Atlas is a step forward in this understanding. It brings together for the first time information from a wide range of sources about the use of our ocean territory. Containing information as diverse as shipping routes, offshore petroleum and gas leases and platforms, shipwrecks and bioprospecting sites, this publication has been compiled for a wide readership.

This Atlas is a publication of the National Oceans Office, an Australian Government agency, but it was made possible through the cooperation of a number of state and federal bodies, research institutions, industry bodies and companies. Their willingness to make their data available for this project has ensured that the Atlas will be a valuable information source for all Australians.



CONTENTS

Title Page	1
Acknowledgements	1
Foreword	2
Contents Page	2
Chapter 1. Introduction	3
Chapter 2. Description of Marine Regions	5
Chapter 3. Description of Map Themes	7
Chapter 4. Base Map Details	9
Chapter 5. Atlas Maps	10
Base Map	12
Cultural Heritage	13
Defence	14
Indigenous	15
Natural Heritage	18
Ocean Disposal	24
Petroleum/ Mining	31
Research	36
Shipping	38
Tourism, Recreation, Sport	47
Miscellaneous	50
Multiple Use Maps	55
Chapter 6. Map Data Caveat	71
Chapter 7. Data source references	73
Chapter 8. Glossary	74
Chapter 9. Key Word Index	75



CHAPTER 1

INTRODUCTION

Australia's Oceans Policy

Australia's Oceans Policy was launched by the Australian Government in 1998, the International Year of the Ocean. The Policy has a number of aims, including: exercising and protecting Australia's rights over its marine jurisdictions; meeting obligations under the United Nations Convention on the Law of the Sea (UNCLOS); understanding and protecting the marine environment; promoting ecologically sustainable economic development and establishing integrated planning and management.



Regional Marine Planning

At the core of *Australia's Oceans Policy* is regional marine planning, which aims to put in place a management regime at the large marine ecosystem level. Regional marine plans will integrate across economic, environmental, social and cultural objectives. The plans will provide a focus for coordination between existing and developing ocean uses and the range of sectoral and administrative agencies with responsibility for marine systems. The first regional marine plan will be completed in 2004 for the South-East Marine Region.

The National Oceans Office

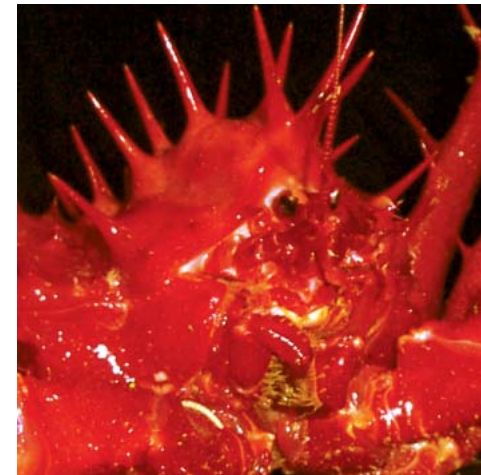
The National Oceans Office was formally established on 22 December 1999. The Office, based in Hobart, is responsible for the implementation and further development of *Australia's Oceans Policy*. The Office is responsible for managing the development of regional marine plans around Australia.

The National Oceans Office coordinates a National Work Program to provide scientific information to support implementation of *Australia's Oceans Policy* through regional marine plans. Examples of relevant scientific information include bioregionalisation, socio-economic and marine scientific datasets and performance assessment.

The focus of the National Work Program is on priority projects that are more efficiently and effectively done on a national scale or are critical for work in priority areas (Northern, South-west) for regional marine planning. This national approach provides considerable efficiency gains

over a "region by region" approach. It also ensures a level of consistency between regions and opportunities to link with, and add value to, existing or planned activities of science agencies, including international collaboration.

A senior level Oceans Policy Science Advisory Group and technical Working Groups provide advice and direction for the Work Program. One major focus for the National Work Program is a National Mapping Project.





This Atlas

This atlas contains a series of maps depicting the non-fisheries uses of Australia's marine jurisdiction. The atlas has been prepared for the National Oceans Office as a result of a national project involving the collation of marine-related datasets of various standards and formats from numerous organisations, including State and Australian Government agencies, private organisations and scientific research agencies.

The aim of this atlas is to demonstrate where activities occur in Australia's marine jurisdiction, where marine activities interact in Australia's marine jurisdiction, and where interactions occur between these marine activities and socio-economic factors.

The information depicted in this atlas will be used in combination with fisheries information being prepared under a project funded by the National Oceans Office and the Fisheries Research and Development Corporation (FRDC), in future mapping work.



Other Atlas Documents

This National Atlas, which contains a set of national maps, is supported by a similar hard copy atlas for the Northern Planning Area. Maps for other regions are available on-line at the website of the National Oceans Office (http://www.oceans.gov.au/nonfish_atlas.jsp) and also on CD-ROM.

Each Regional Atlas contains a similar set of information.

Spatial Datasets

The datasets drawn on to produce the maps contained in this atlas have been sourced from a large number of organisations, including State and Australian Government agencies, private organisations and scientific research agencies. A list of organisations from which data has been obtained is included in Chapter 7.

Neptune

Additional details on the datasets used can be sourced from the National Oceans Office metadata database called NEPTUNE (viewable at <http://neptune.oceans.gov.au>.) A description of all map products is also available on NEPTUNE.



CHAPTER 2

DESCRIPTION OF AUSTRALIAN MARINE REGIONS

Maps in this atlas include a set of national maps. A further series of maps has been created, based on the marine regions identified in Figure 1. These regions have been defined by the existence of large ecosystems within Australia's marine jurisdiction and do not specifically relate to jurisdictional or regional marine planning boundaries.

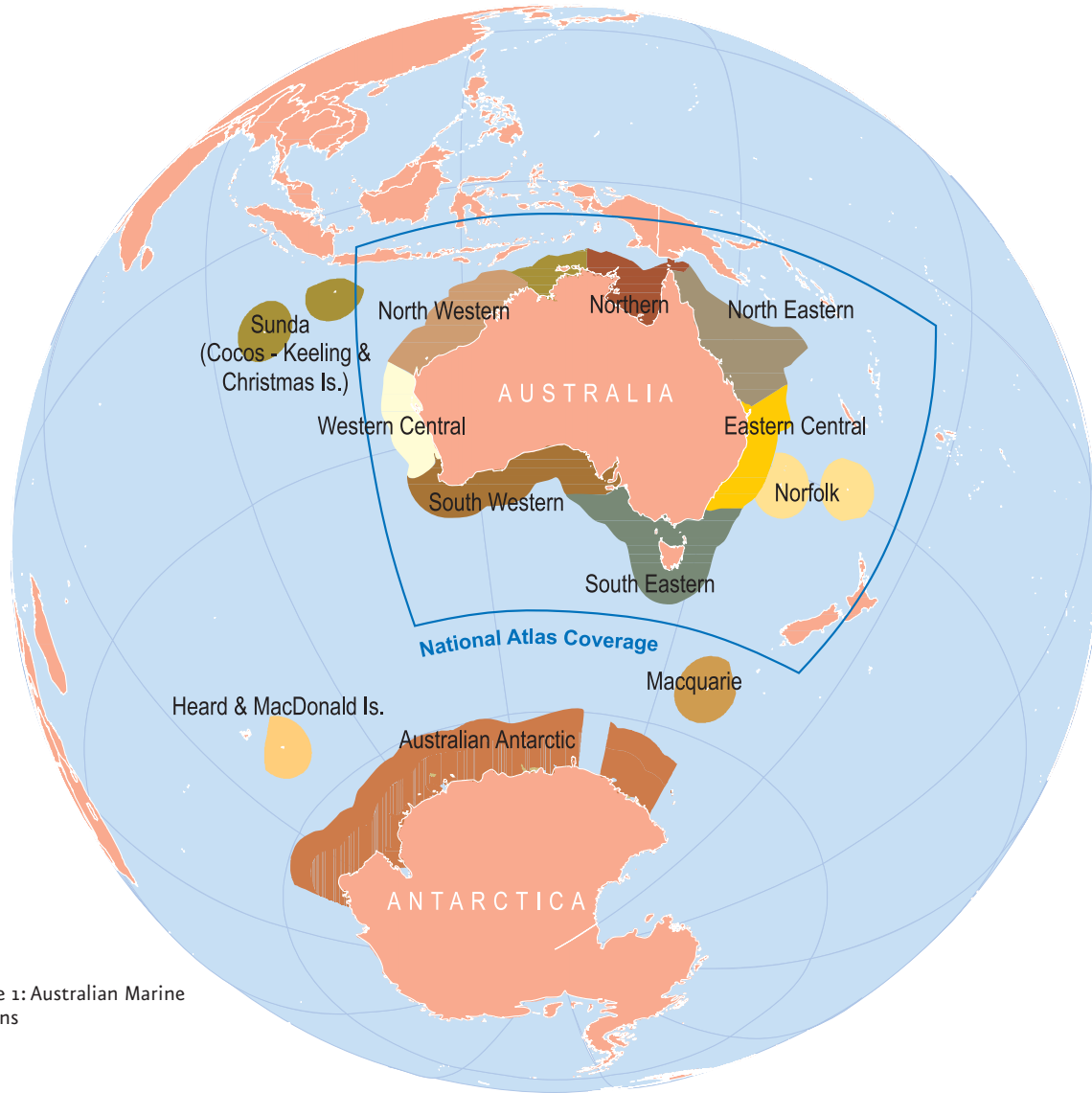


Figure 1: Australian Marine Regions





Northern Marine Region

The Northern Region covers about 860 thousand square kilometres of water off the Northern Territory and Queensland coast, and includes the Torres Strait and the Gulf of Carpentaria. The Region extends from Admiralty Gulf, Northern Territory in the west to north-west Queensland, where it includes the west side of the York Peninsula.

North-western Marine Region

The Northern-western Region covers about 980 thousand square kilometres of water off northern Western Australia, and includes Ashmore Reef and Exmouth Gulf. The Region extends from Admiralty Gulf in the north-east, to around the town of Exmouth in the south (at latitude 210° 48'S).

Western-central Marine Region

The Western-central Region covers about 620 thousand square kilometres of water off central Western Australia, and includes Shark Bay. The Region extends from around the town of Exmouth in the north (at latitude 210° 48'S) to Perth in the south (at latitude 310° 58'S).

South-western Marine Region

The South-western Region covers about 1.1 million square kilometres of water off southern Western Australia and South Australia, and includes the Great Australian Bight and Kangaroo Island. The Region extends from Perth in the west (at latitude 310° 58'S) to Victor Harbor, South Australia in the east (at 1380° 5'E and 350° 37'S).

South-east Marine Region

The South-east Region covers more than 1.2 million square kilometres of water off eastern South Australia, Victoria, Tasmania, and southern New South Wales, and includes Bass Strait and Macquarie Island. The Region extends from Victor Harbor, South Australia in the west to the town of Bermagui, NSW (south of latitude 360° 30'S) in the east.

Eastern-central Marine Region

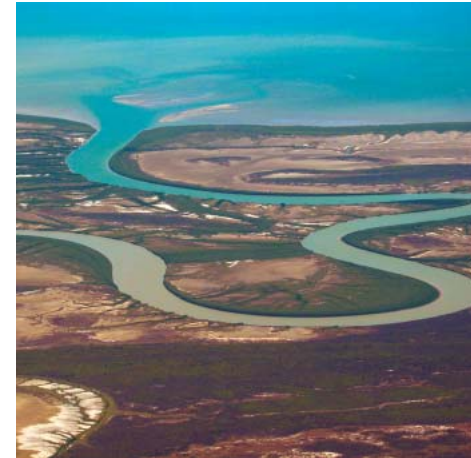
The Eastern-central Region covers about 720 thousand square kilometres of water off central and northern New South Wales and southern Queensland, and includes the waters off Sydney, Brisbane and Fraser Island. The Region extends from the town of Bermagui, NSW (at latitude 360° 30'S) in the south, to Lady Elliot Island, Queensland (at latitude 240° 17'S) in the north.

North-eastern Marine Region

The North-eastern Region covers more than 1.3 million square kilometres of water off central and northern Queensland, and includes the Great Barrier Reef and Whitsunday Islands. The Region extends from Lady Elliot Island (at latitude 240° 17'S) in the south, to around Cape York (at latitude 100° 41'S) in the north.

Sunda Marine Region

The Sunda Region covers two separate areas totalling more than 1.1 million square kilometres of water off Cocos Island and Christmas Island. These islands are located about 1.2 thousand and 2.2 thousand kilometres respectively from Exmouth in north-west Western Australia.



CHAPTER 3

DESCRIPTION OF MAP THEMES

Maps in this atlas are presented under a series of non-fisheries marine-related themes for each Marine Region. The maps aim to show important mappable themes for non-fisheries uses in Australia's marine jurisdiction. The atlas specifically excludes fisheries information (including aquaculture), including the social and economic component of fisheries.

Atlas maps themes are listed below with a brief explanation of the information shown in each theme.



Cultural Heritage

- Shipwrecks
- Coastal fortifications
- Custom houses

Defence

- Defence training areas

Indigenous

- Native Title claims and Indigenous land use agreements
- Language group map

Natural Heritage

- Marine protected areas
- Coastal protected areas
- Ramsar sites
- Selected listed species
- Introduced marine species
- Threatened species
- Marine and Coastal Community Network membership

Ocean Disposal

- Pollution
- Sewerage waste facilities
- Ocean disposal sites

Petroleum/ Mining

- Petroleum titles, current leases and new acreage
- Seismic surveys
- Oil and gas wells
- Petroleum fields and infrastructure
- Offshore mining sites

Research

- Wave rider buoys
- Tide gauges
- Marine research institutes
- Marine research voyages
- Argo floats
- Mean annual average wave heights





Shipping

- Lighthouses
- Shipping routes
- Ports
- Port statistics
- Port limitations

Tourism, Recreation, Sport

- Charter boat operations
- Yacht races

Miscellaneous

- Australian coast guard operational areas
- Submarine cables
- Jurisdictional boundaries

Multiple Use Maps

Interactions between various uses across the marine jurisdiction

CHAPTER 4

BASE MAP DETAILS

An explanation of base map symbology used on each map is described in this chapter. This information has not been shown on individual maps due to space limitations and to reduce unnecessary clutter. The information presented should be cross referenced when viewing individual atlas maps.

Datum and Projections

All maps are in geographic projection.

Map Scale

Map scale is 1:30M



Reference Maps

A reference map is provided as the first map in the map series contained in this atlas. This map contains information that is not included on other maps in the atlas. The map is provided for reference purposes to clarify key geographical features and place names.

Map Data Caveats

Atlas maps presented in this publication should be viewed in conjunction with the Map Data Caveats detailed in Chapter 6.

Disclaimer Information

The National Oceans Office and Spatial Vision make no claims as to the accuracy of the information shown on maps contained in this atlas, or the accuracy of information provided by third parties.

While every effort has been made to ensure that the information is accurate, the National Oceans Office and Spatial Vision will not accept any liability for any loss or damage which may be incurred by any person acting in reliance upon the information.

The maps have been prepared for illustrative purposes only and should not be used for navigation purposes.

EXPLANATION OF MAP SYMBOLS ON BASE MAPS

Bathymetry

Bathymetric depth (depth below mean sea level)

