

**11<sup>TH</sup> WEND COMMITTEE MEETING  
Tokyo, 2-5 September 2008**

Paper for Consideration by WEND  
**REPORTS FROM REGIONAL HYDROGRAPHIC COMMISSIONS**

<b>Submitted by:</b>	RHC Chairpersons, via the IHB
<b>Executive Summary:</b>	Decision 17.a of the 16 <sup>th</sup> IH Conference included that “..... <i>Regional Hydrographic Commissions should report annually to WEND</i> ”. WEND Letter 1/2008 requested RHC Chairpersons to provide a brief report on WEND-related activities in their respective regions. A compendium of RHC reports is presented hereafter.
<b>Related Documents:</b>	None.
<b>Related Projects:</b>	None.
<b>Action required of WEND:</b>	To take note of these reports.

## 1. NORDIC HYDROGRAPHIC COMMISSION (NHC)

**Finnish Maritime Administration**

**Hydrographic department**

Juha Korhonen

26 June 2008

**NHC Report regarding to the IHO Work Program (CONF 17/REP/01rev1)**

Status of the Tasks 1.1.17 - 1.1.19 of the IHO Work Programme on members of the Nordic Hydrographic Commission.

### **Task1.1.17 RHCs to work to complete ENC coverage for High Speed Crafts (HSC) by 01 JUL 2008**

RHCs Chairmen to encourage MS in their RHCs to make ENCs available as necessary and to seek assistance from the CBC if needed. Audit the state of completion and report to WEND/IRCC.

Denmark: *Danish waters are covered by ENCs.*

Greenland: *There are no High Speed Crafts in the Greenlandic waters.*

Faroe Island: *There are no High Speed Crafts in the Faroese waters.*

Finland: *Finnish ENC coverage for High speed craft completed.*

Iceland: *There are no High Speed Crafts (HSC) sailing in Icelandic waters.*

Norway: *Norwegian waters will be covered by ENCs.*

Sweden: *Swedish waters are already covered by ENCs.*

**Task 1.1.18 RHCs to work to complete adequate ENC coverage for all other types of vessels by 31 DEC 2010**

RHCs Chairmen to encourage MS in their RHCs to make ENCs available as necessary and to seek assistance from the CBC if needed. Audit the state of completion and report to WEND/IRCC.

Denmark: *Danish waters are covered by ENC's.*

Greenland: *46% of Major Ports in Greenlandic waters will have ENC coverage by end of 2010*

Faroe Island: *Faroese waters will have ENC coverage by end of 2010*

Finland: *Finnish waters will be covered by ENCs by 2010.*

Iceland: *Icelandic waters will be fully covered with ENCs before end of 2010.*

Norway: *Norwegian waters and major international trade ports and routes for*

Svalbard: *Svalbard will be covered by ENC by 2010.*

Sweden: *Swedish waters are already covered by ENCs.*

**Task 1.1.19 RHCs to work to complete adequate ENC coverage schemes by 31 DEC 2008**

RHCs Chairmen to encourage MS in their RHCs to develop national ENC coverage schemes and to seek assistance from the CBC if needed. Audit the state of completion and report to WEND/IRCC.

Denmark: *Danish waters are covered by ENC'.*

Greenland: *Adequate ENC coverage scheme is available by end of 2008.*

Faroe Island: *Adequate ENC coverage scheme is available by end of 2008.*

Finland: *Finnish waters will be covered by ENCs by 2010.*

Iceland: *Iceland will do a coverage scheme before 31 Dec 2008.*

Norway: *Norwegian waters and main ports and routes to Svalbard will be covered by ENC by 2010.*

Svalbard: *Main ports and routes to Svalbard will be covered by ENC by 2010.*

*There is a scheme to cover also eastern Svalbard by 2010 and 2011.*

Sweden: *Swedish waters are already covered by ENCs.*

## 2. EAST ASIA HYDROGRAPHIC COMMISSION

### 1. Chair

Chair: Mr Parry OEI, Singapore

Vice-Chair: Vice-Admiral Congvat NEELASRI, Thailand

### 2. Members:

China, Democratic People's Republic of Korea, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore and Thailand.

### 3. EAHC Events since 1<sup>st</sup> X-WEND in Oct 2007 to 2008

Date	Event	Venue	Outcome/Plans
11 Dec 2007	Launch of ENC's covering 18 major Ports in Indonesia	Jakarta	<ul style="list-style-type: none"><li>• Completion of the Indonesian ENC's covering their 18 major ports and ASLs.</li><li>• Medium and large scale ENC's covering their major ports and shipping routes would be made commercially available.</li></ul>
23 – 25 Jan 2008	2 <sup>nd</sup> EAHC Coordinating meeting	Chiangmai, Thailand	<ul style="list-style-type: none"><li>• Annual Meeting of Chief Hydrographers.</li><li>• Review and setting of strategic directions for the EAHC for Y2008.</li><li>• This included review of South China Sea (SCS) ENC, Assessment of critical wrecks and shoals along the main shipping routes in the SCS, ENC Capacity Building for the region and ENC coverage for High Speed Crafts routes.</li></ul>
24 -25 Apr 2008	Technical visit to Vietnam Maritime Safety	Vietnam	<ul style="list-style-type: none"><li>• Chair EAHC (Parry Oei) visited MSC 1 and 2 to :<ul style="list-style-type: none"><li>○ Encourage Vietnam to join</li></ul></li></ul>

	Company (MSC) 1 & 2		<p>the IHO and EAHC.</p> <ul style="list-style-type: none"> <li>○ Assess their hydrographic requirements, including ENC production and harmonisation.</li> <li>• Vietnam expressed interest to join the IHO.</li> </ul>
20 Jun 2008	3 <sup>rd</sup> World Hydro Day (WHD)	Singapore	<ul style="list-style-type: none"> <li>• Celebration with EAHC MS in line with this year's WHD's theme of Capacity Building.</li> </ul>
27 – 29 Jun 2008	6 <sup>th</sup> IHO CBC Meeting	IHB, Monaco	<ul style="list-style-type: none"> <li>• IHO CBC approved funds for EAHC CBC training on QA ENC in 2009.</li> </ul>
16 – 18 Jul 2008	2 <sup>nd</sup> EAHC ENC TaskGroup Meeting	Cebu, Philippines	<ul style="list-style-type: none"> <li>• Meeting with Member States (MS) to discuss : <ul style="list-style-type: none"> <li>○ Matters arising from NAV54</li> <li>○ New Edn of SCS ENC</li> <li>○ ENC harmonisation</li> <li>○ SCAMIN Guidelines</li> <li>○ Updates on medium and large scale ENCs by MS</li> <li>○ Preparation for 11<sup>th</sup> WEND meeting.</li> </ul> </li> </ul>
2 – 5 Sep 2008	Launch of 2 <sup>nd</sup> Edition of the South China Sea (SCS) ENC	11 <sup>th</sup> WEND Meeting, Tokyo	<ul style="list-style-type: none"> <li>• Announcement on the launch of the new edition of the SCS ENCs.</li> </ul>
Sep 2008	EAHC QA ENC Training Course	Thailand	<ul style="list-style-type: none"> <li>• As part of the EAHC CBC programme, a 3 day training course will be conducted for EAHC MS.</li> <li>• Training supported and funded by IHO CBC.</li> </ul>

### 3. SOUTHERN AFRICA AND ISLANDS HYDROGRAPHIC COMMISSION

#### **STATUS OF ELECTRONIC NAVIGATIONAL CHART (ENC) PRODUCTION: SAIHC**

##### **ENC coverage in waters under responsibility of South Africa in SAIHC area**

###### **Introduction**

South Africa has chosen the following paper chart - ENC relationship:

Chart Series	ENC Usage Band
SAN Harbour charts	Harbour
SAN Approaches charts	Approaches
SAN 100 000 and 150 000 Series charts	Coastal (for RSA charting area)
SAN 300 000	Coastal (for Namibian charting area)
SAN 600 000 Series	General
SAN 1 000 000 Series and all other small scales	Overview

###### *Coverage*

Significant gaps in coverage: none

###### *Conformance*

*The ENC's in the Coastal, General and Overview usage bands are compiled from more than one paper chart. All ENC's conform to the current guidelines for data consistency. Published ENC's meet the standards in S-57 and are based on INT or a national paper chart series, which in turn meets the standards in M-4.*

###### *Production*

ENCs are produced using dKart Editor.

Validation tools used are dKart Inspector (built into Editor) and SevenCs Analyser.

Overall assessment and viewing done using Transas NaviSailor 2000.

###### *Staff*

Currently one staff member is involved full time with S-57 matters.

###### **For the purpose of this report ENC's for South Africa and Namibia are as follows:**

GENERAL and OVERVIEW usage bands are grouped for Offshore passage/Small;

COASTAL usage band are grouped for Landfall and Coastal passage/Medium;

HARBOUR and APPROACHES usage band are grouped for Approaches and Ports/Large.

## **2. NAUTICAL CHARTING**

### **2008**

<b>Purpose/Scale</b>	<b>RSA%</b>	<b>NAMIBIA%</b>
Offshore passage/Small	33	33
Landfall and Coastal passage/Medium	92	0

Approaches and Ports/Large	100	100
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2010

Purpose/Scale	RSA%	NAMIBIA%
Offshore passage/Small	100	100
Landfall and Coastal passage/Medium	92	100
Approaches and Ports/Large	100	100

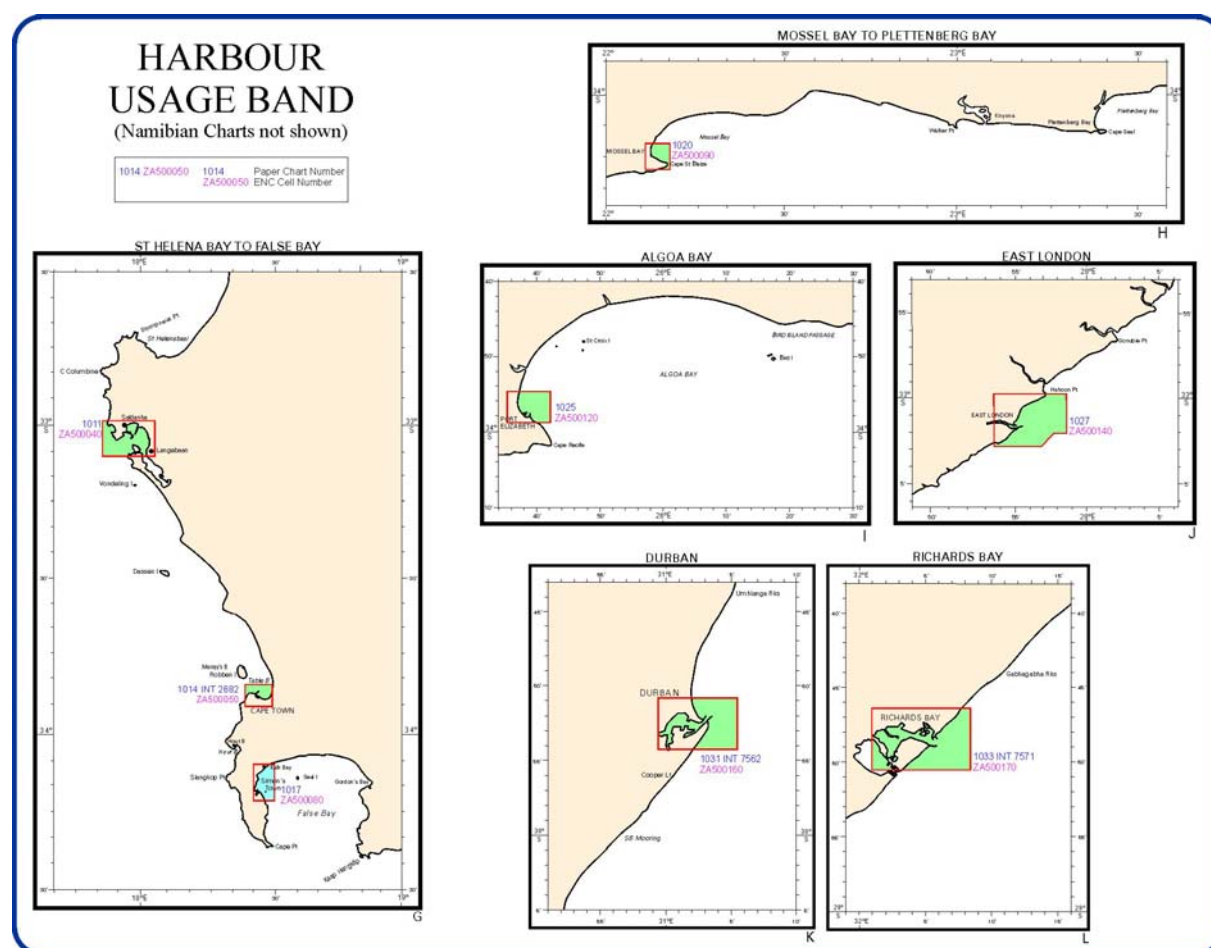
## STATUS BY USAGE BAND

### 2008 - Harbour Usage Band

ENCs of RSA Waters 7/7

ENCs of Namibian Waters 2/2

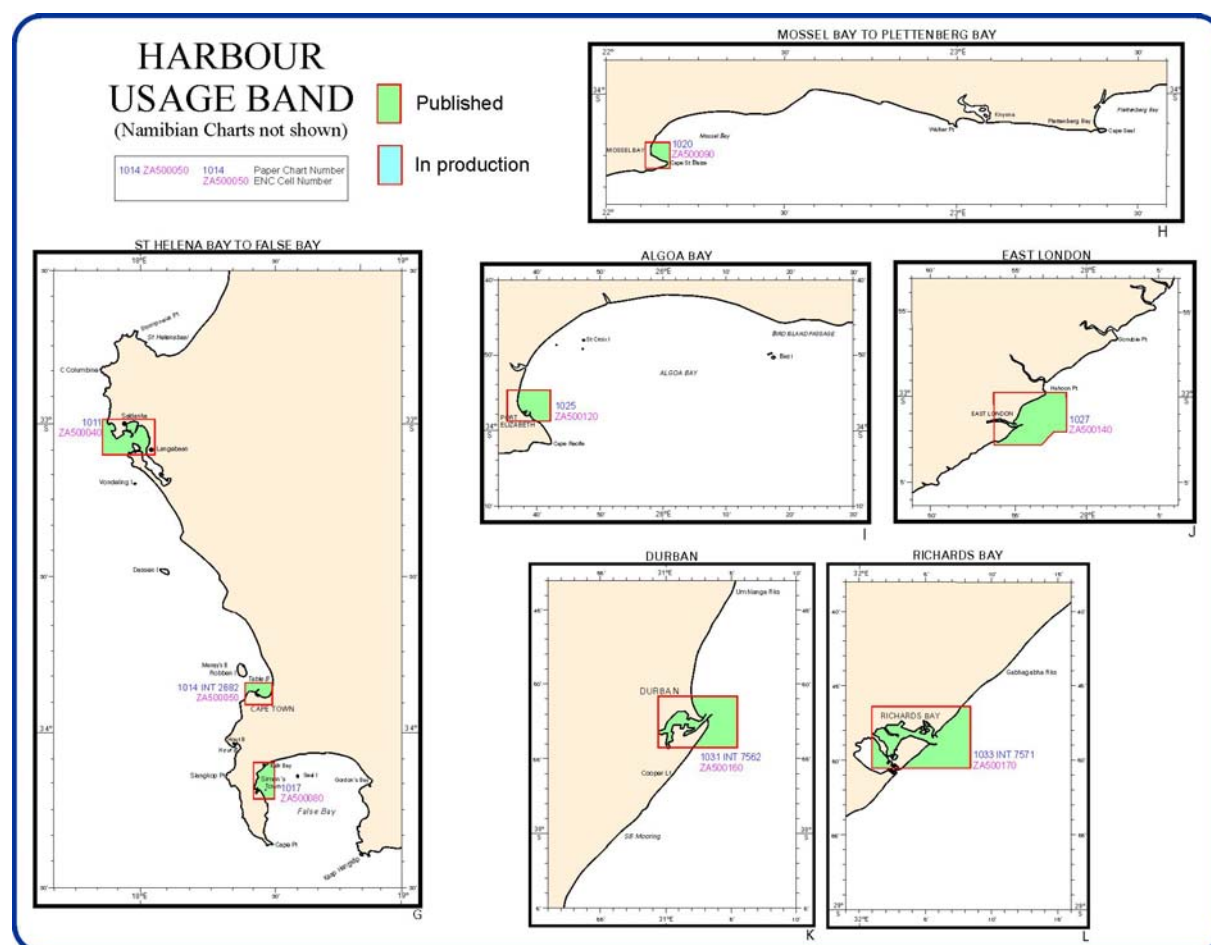
Purpose/Scale	RSA%	NAMIBIA%
Approaches and Ports/Large	100	100



## 2010 - Harbour Usage Band

ENCs of RSA Waters 7/7  
ENCs of Namibian Waters 2/2

Purpose/Scale	RSA%	NAMIBIA%
Approaches and Ports/Large	100	100

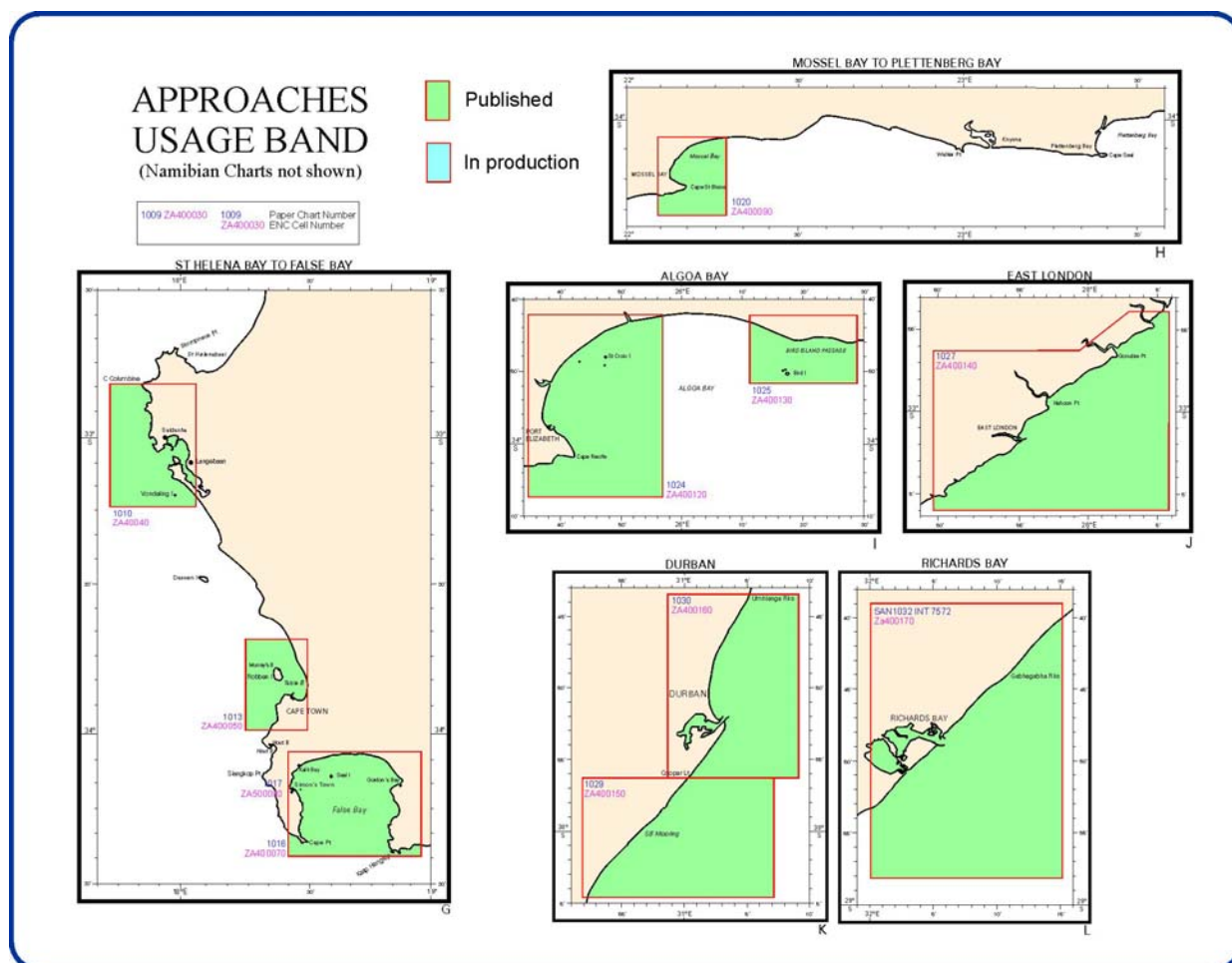


Note : the ENC ZA500080 is not an INT harbour

## 2008 - Approaches Usage Band

ENCs of RSA Waters 10/10  
ENCs of Namibian Waters 2/2

Purpose/Scale	RSA%	NAMIBIA%
Approaches and Ports/Large	100	100



### 2010 - Approaches Usage Band

ENCs of RSA Waters 7/7  
ENCs of Namibian Waters 2/2

Purpose/Scale	RSA%	NAMIBIA%
Approaches and Ports/Large	100	100

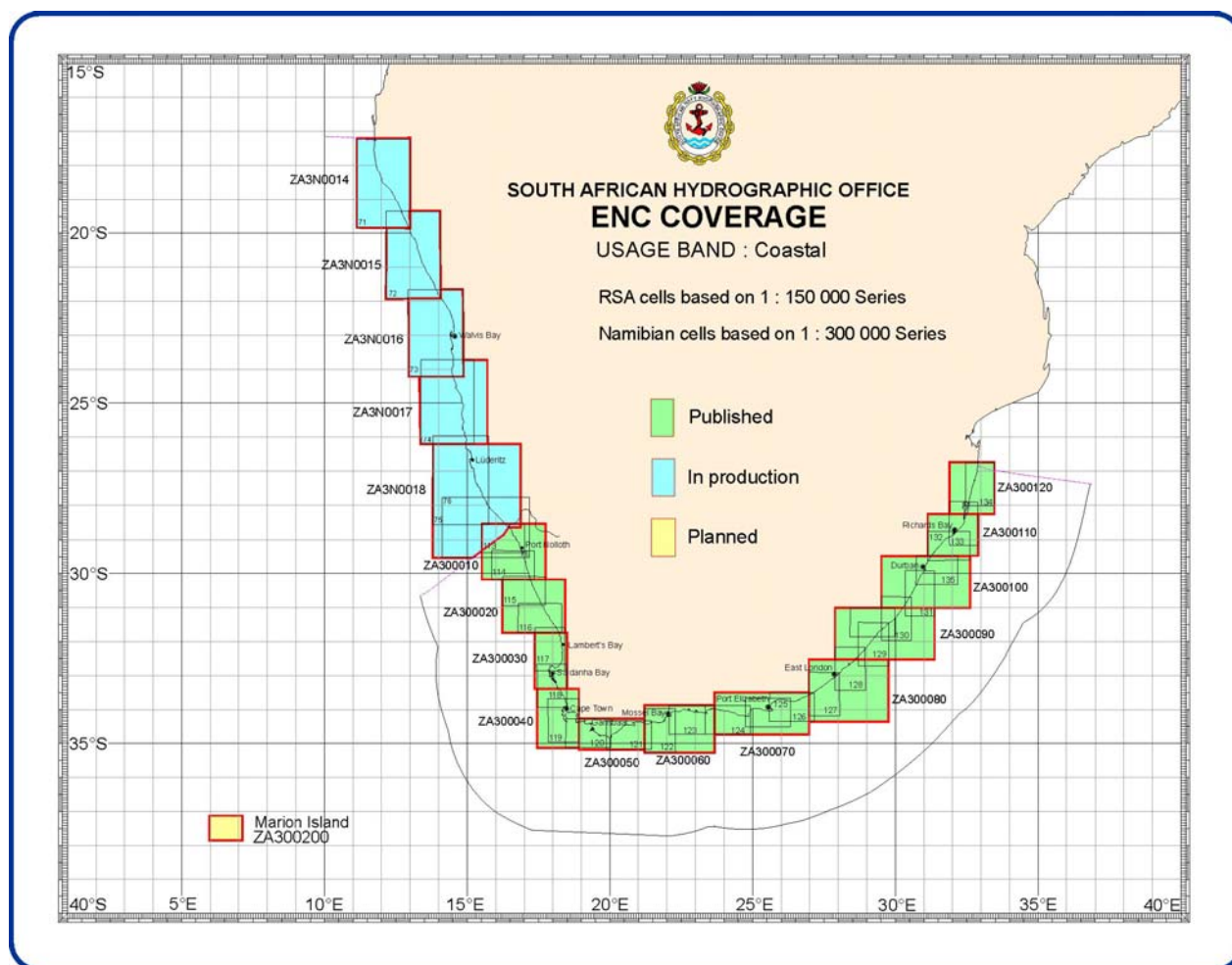
Diagram as for 2008 APPROACHES Usage Band above.

### 2008 - Coastal Usage Band

ENCs of RSA Waters 12/13  
ENCs of Namibian Waters 0/5

Purpose/Scale	RSA%	NAMIBIA%
Landfall and Coastal passage/Medium	92	0



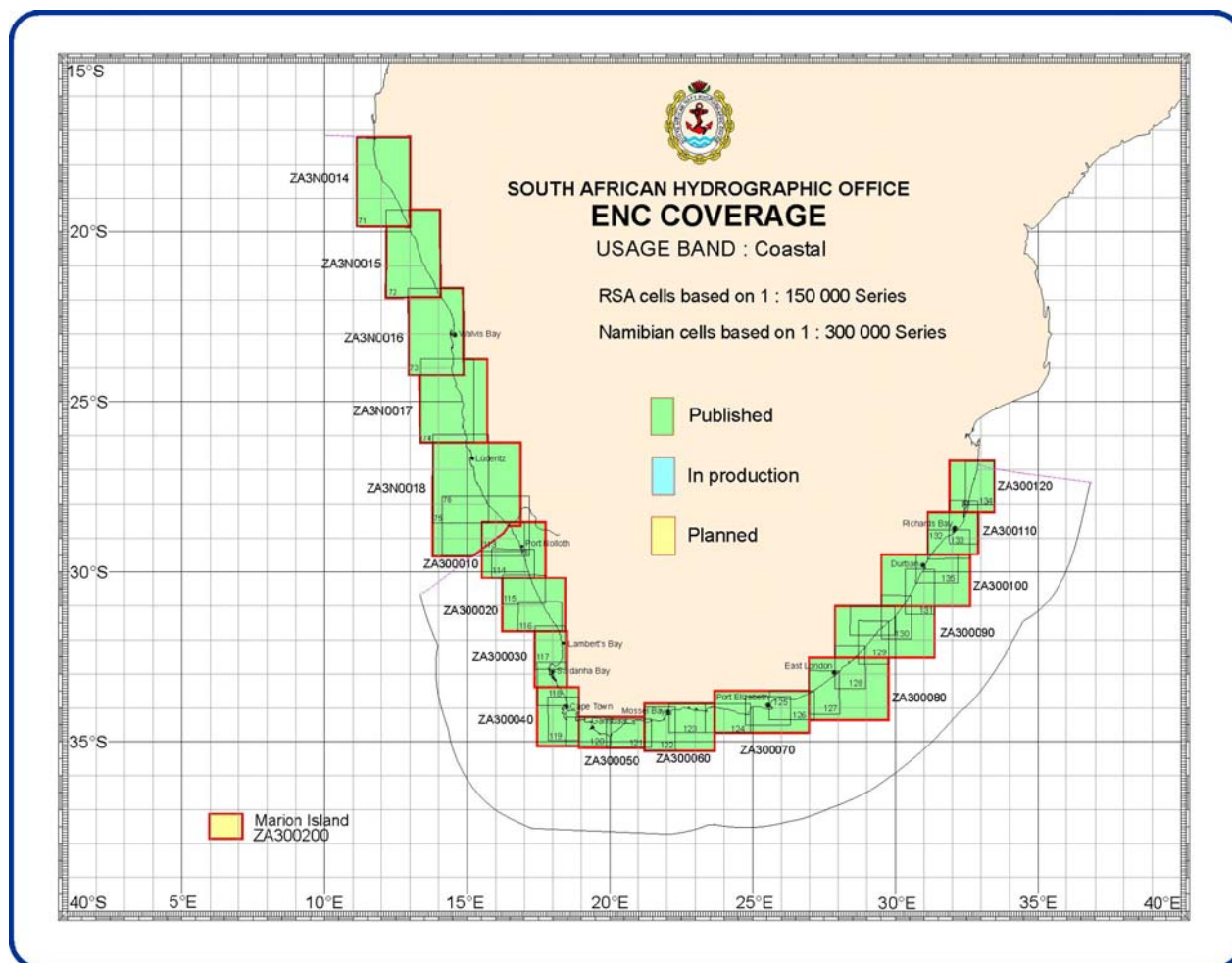


## 2010 - Coastal Usage Band

ENCs of RSA Waters 12/13

ENCs of Namibian Waters 5/5

Purpose/Scale	RSA%	NAMIBIA%
Landfall and Coastal passage/Medium	92	100

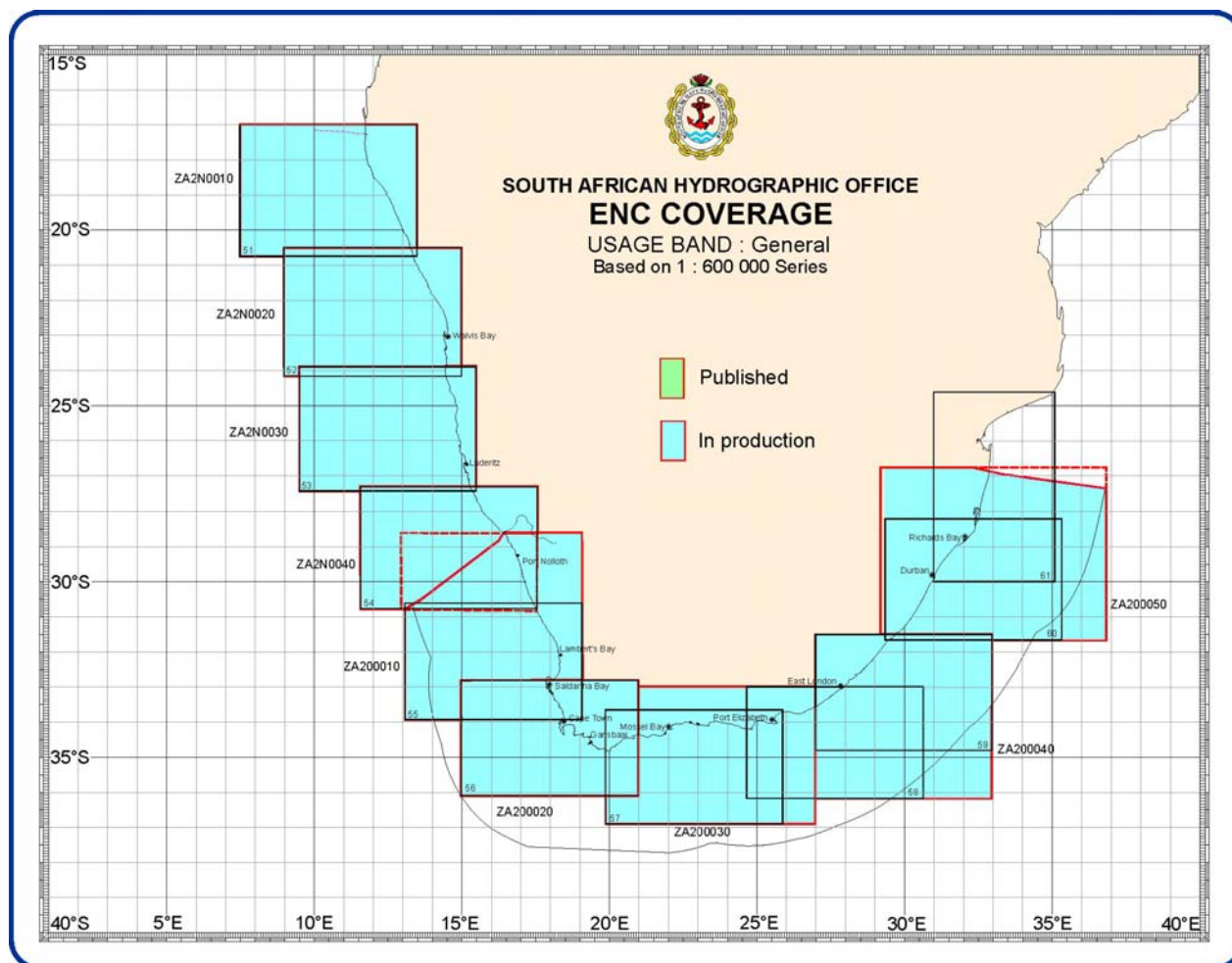


### 2008 - General Usage Band

ENCs of RSA Waters 0/5

ENCs of Namibian Waters 0/4

Purpose/Scale	RSA%	NAMIBIA%
Offshore passage/Small	0	0



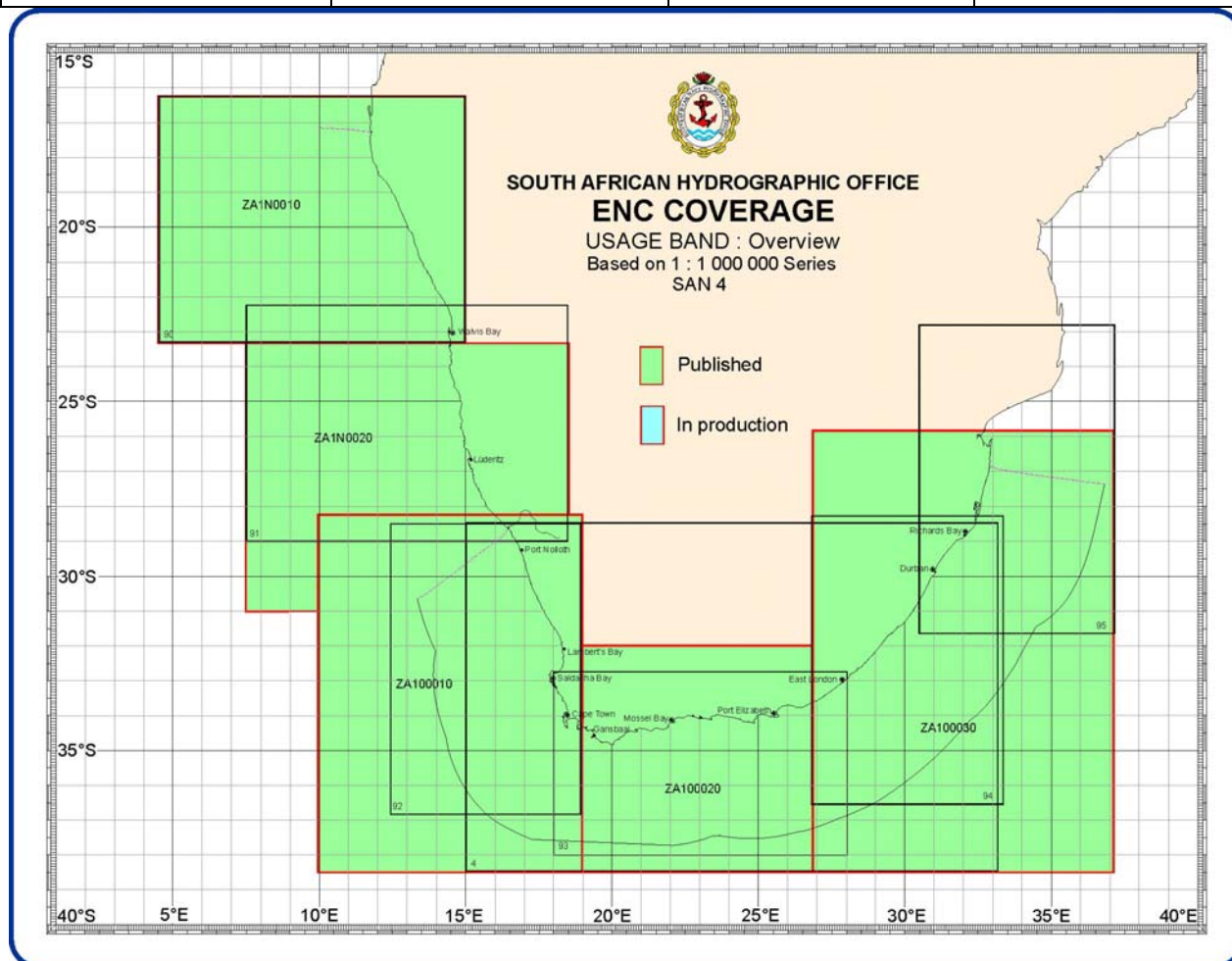
### 2010 - General Usage Band

ENCs of RSA Waters 5/5  
 ENCs of Namibian Waters 4/4

Purpose/Scale	RSA%	NAMIBIA%
Offshore passage/Small	100	100



	Number of routes/harbours	%of routes covered as of 01/07/2008	%of routes expected to be covered as of 01/07/2010
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### 2010 - Overview Usage Band

ENCs of RSA Waters	3/3
ENCs of Namibian Waters	2/2

Purpose/Scale	RSA%	NAMIBIA%
Offshore passage/Small	100	100

Diagram as for 2008 Overview Usage Band above.

### ENC coverage in waters under responsibility of France in SAIHC area

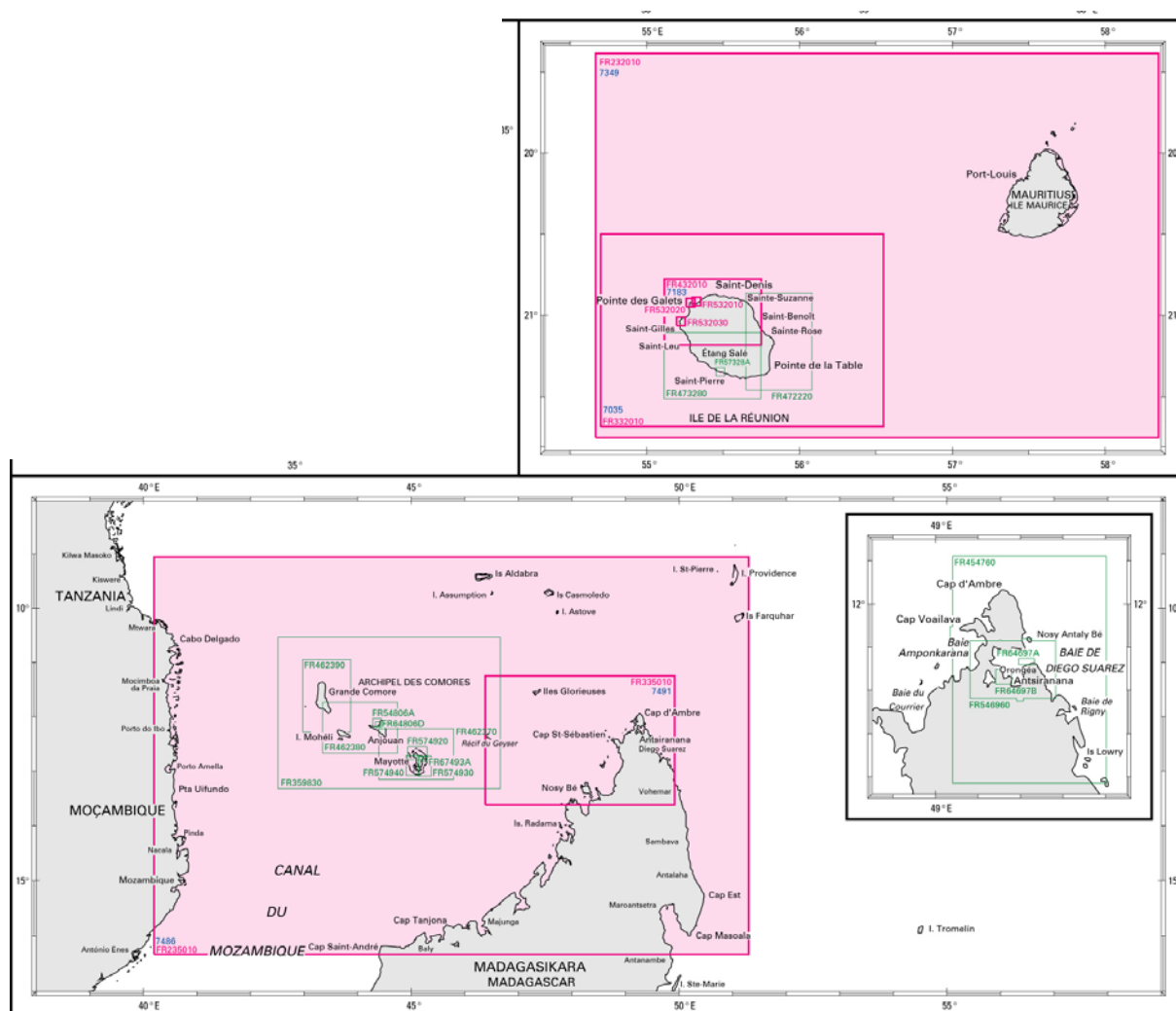
High Speed Crafts	4 (Mayotte - Comoros and	25%	50%*
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	Ile Réunion – Ile Maurice)		
INT routes	2 (Mozambique Channel and South East of Madagascar)	50%	50%**
INT harbours	2 (Port Réunion and Toamasina)	50%	100%

\* at this time, due to the lack of modern hydrographic data, ENC coverage of Comoros Islands will probably be delayed beyond 2010.

\*\* at this time, due to the lack of modern hydrographic data, small scale coverage south-east of Madagascar will also be delayed.



**Legend:** in pink: FR ENCs already produced; in green: ENCs to be produced before end of 2010 or as soon as modern hydrographic data will be available.

### Capacity Building – assistance projects

France is involved in a maritime highway project with the World Bank concerning Madagascar. This concerns capacity building, modern surveys, charting etc.

### ENC coverage in waters under responsibility of Portugal in SAIHC area

Coast of Mozambique – PT 200401 published in March 2007 (Will be renamed to PT 281101)

Coast of Angola – PT 271101 in Production

#### **Capacity Building – assistance projects**

Conducted training in Mozambique (INAHINA) on computer assisted cartography, October 2007

Participated in the CBC Technical visit to Angola, June 2008

#### **4. US-CANADA HYDROGRAPHIC COMMISSION**

U.S. – Canada Hydrographic Commission Report to WEND

<b>Submitted by:</b>	U.S. – Canada Hydrographic Commission
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##### **Background**

The U.S. – Canada Hydrographic Commission meets annually, alternating venues between the U.S. and Canada. The most recent meeting was held in Ottawa, Canada on April 16, 2008. The main topic of this year's meeting was the "U.S. – Canada Transboundary ENC Project". This project was developed by the Commission with the goal of bringing the USCHC regional ENCs into compliance with the WEND Principles - "to ensure a world-wide consistent level of high-quality, updated official ENCs...". The Commission has chosen to divide the region into three sections – Pacific, Central and Atlantic –initially addressing the overlapping ENCs in the Pacific region, and using these results as a template for the other two regions.

##### **Discussion**

A number of challenges have arisen from the "U.S. – Canada Transboundary ENC Project" and the two countries are working together to resolve the issues. These challenges include: developing a method for acknowledging data and intellectual property rights, resolving copyright problems, identifying a mechanism for displaying unresolved international boundaries, determining a mechanism for future data exchange for maintenance purposes, developing a method for concurrent release of Transboundary ENCs, and agreeing on data distribution principles.

Significant progress has been made on the project in the Pacific region over the past year. For two months during the fall of 2007, a Canadian cartographer worked on a rotational assignment at NOAA Office of Coast Survey to identify the challenges that need to be resolved. Subsequently, the Office of Coast Survey (OCS) and Canadian Hydrographic Service (CHS) finalized where the potential cuts to the Pacific coast ENCs will occur, the U.S. Department of State approved a note for use with disputed boundaries on the ENCs, and a U.S. cartographer worked on rotational assignment at CHS to identify potential solutions to the challenges identified over the past year.

The next steps for the project are...

- 1) to finalize and document the technical procedures and the overarching business rules
- 2) to address the transboundary ENCs in Central and Atlantic districts
- 3) to undertake stakeholder discussions and prepare a communication release

## Conclusion

The Transboundary project between OCS and Pacific Region of CHS is intended to be a project template for future ENC production between OCS and CHS regions. At the conclusion of this endeavour, it is expected that the management level issues will be resolved, the technical issues will be documented, and a workflow process will be in place. After the coordination and documentation between OCS and the Pacific Region of CHS has been resolved, this methodology can be used in the other regions to produce Transboundary ENCs.

## Action Required of WEND

The WEND Committee is invited to note this report.

## 5. SOUTH WEST PACIFIC HYDROGRAPHIC COMMISSION (SWPHC)

WEND related activities and status of ENC production in region L ( SWPHC)

<b>Submitted by:</b>	France (Chair of SWPHC, since January 2008) with the kind support of Australia
<b>Executive Summary:</b>	This paper gives the outlines of the ENC production in region L of the South West Pacific Hydrographic Commission.
<b>Related Documents:</b>	/
<b>Related Projects:</b>	/

The global ENC coverage analysis and forecasts presented at the Extraordinary WEND meeting in October 2007 showed significant gaps in Africa, South America, Australasia and the South West Pacific, and indicated that these gaps were likely to persist in 2010 in some areas of the Caribbean, in most of the South West Pacific and in Africa.

Based on S-55, SWPHC members also highlighted at the last SWPHC meeting (8<sup>th</sup> meeting – September 2007) that major gaps in shipping route survey still remain in the region, that chart coverage (paper and electronic) had been improved, but underpinning source data had not been upgraded accordingly. Large scale coverage may then be inadequate for safe navigation of deeper draught vessels.

Taking into account this assessment, efforts have been made to progress on ENC coverage, small scale ENC schemes, capacity building and cooperation in the South West Pacific region. This report gives the outlines and status of ENC production in this region.

SWPHC members are: Australia, Fiji, France, New Zealand, Papua New Guinea (PNG), Tonga, UK and USA.

Members producing ENCs are: Australia, France, New Zealand, UK and USA

Members not producing ENCs are: Fiji, Papua New Guinea, Tonga...

Non-IHO member states (Tuvalu, Cook Islands, Nauru, Vanuatu, Tokelau, Kiribati...) do not produce ENCs.

Members producing ENCs for other nations: Australia, UK, New Zealand

Members of RENCs or distributing through RENCs: Australia, France, UK and USA

### A- ENC coverage on international and High Speed Crafts (HSC) routes



Production forecasts indicate that coverage of priority routes (HSC and international shipping) will be greatly improved between 2008 and 2010. It will globally reach 100% coverage in the waters under jurisdiction of IHO member states. Elsewhere, by lack of information, some routes may not be covered yet but might at least be covered within UKHO AVCS (to be confirmed by UK).

#### 1. HSC routes

	<b>Number of HSC routes</b>	<b>%of routes covered as of 01/07/2008</b>	<b>%of routes expected to be covered as of 01/07/2010</b>
Australia (incl. PNG)	49	24%	100%
France	8	12%	100%
New Zealand	?	-	100%
United Kingdom		Information to be completed	
USA	0	No info available	-
<i>Other nations (such as Kiribati) covered by UK</i>		No info available	
total			100

#### 2. INT routes

	<b>Number of INT routes</b>	<b>%of routes covered as of 01/07/2008</b>	<b>%of routes expected to be covered as of 01/07/2010</b>
Australia (incl. PNG)	40	42%	100%
France	2	50%	100%
New Zealand	?	-	100%
United Kingdom			
USA	0	-	-
total			

#### 3. INT harbours

	<b>Number of INT harbours</b>	<b>%of harbours covered as of 01/01/2008</b>	<b>%of harbours expected to be covered as of 01/07/2010</b>
France	2	0%	100%
Australia (inc. PNG)	40	42%	100%
France	2	0%	100%
New Zealand	?	-	100%

United Kingdom			
USA	0	-	-
total		-	-

Note concerning New Zealand:

It is intended that the first official ENC's produced by New Zealand will be available in 2008 with between 10 to 20 ENC's covering areas around Auckland and Wellington. There will thus be sufficient coverage available rapidly to comply with the IMO mandatory regulations for high speed and dynamically controlled craft.

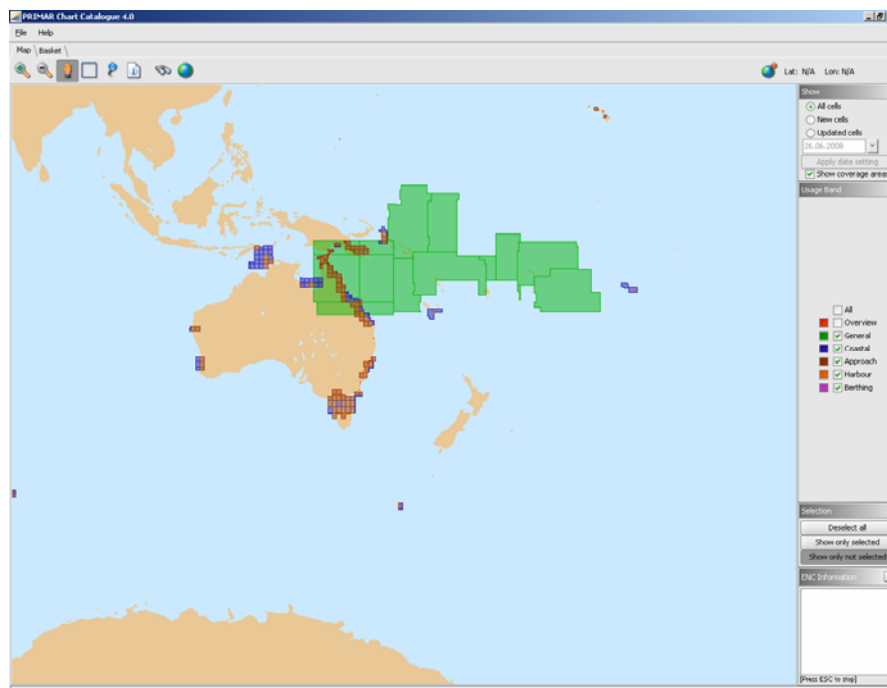


Figure 1: Available coverage as of 26<sup>th</sup> June 2008 (overview ENC's not included)

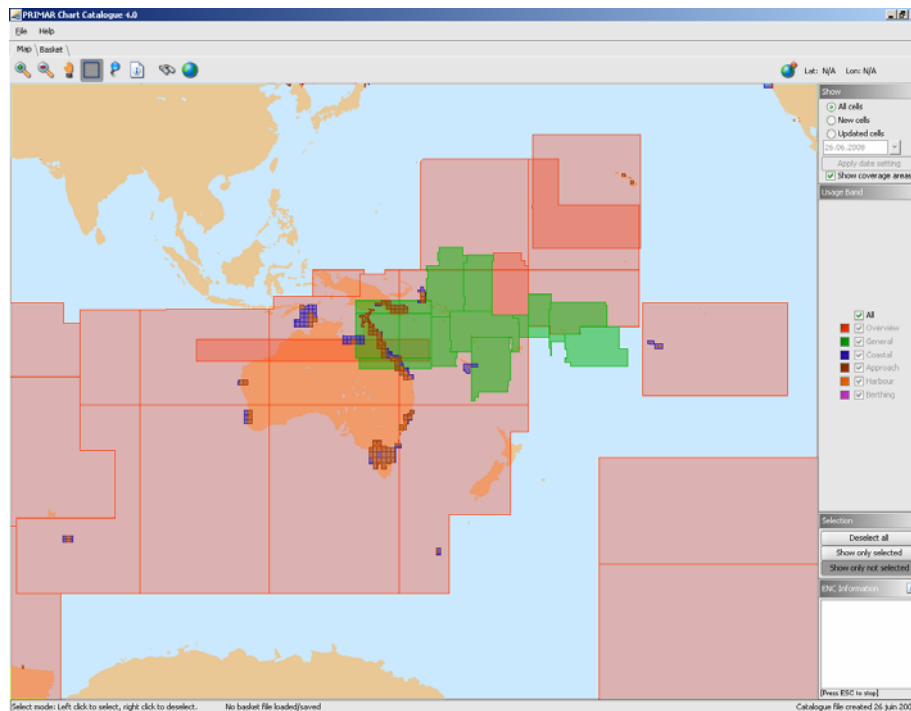


Figure 2: Available coverage as of 26<sup>th</sup> June 2008 (including overview ENCs)

## B – Small scale ENC schemes

Draft schemes for navigational purpose 1 and 2 (see figures 3 and 4) have been successfully established during the last 6 months under the lead of Australia (INT chart coordinator), in accordance with the WEND Principles. They are mainly based on national charting responsibilities but also recognize that some ENC cells already exist and will allow adjustments in the future. Overlaps, navigation purpose consistency and consideration of adjacent RHC schemes have also been taken into account.

However, overlapping data in navigation purpose 1 (Overview) still has to be addressed (see figure 5).

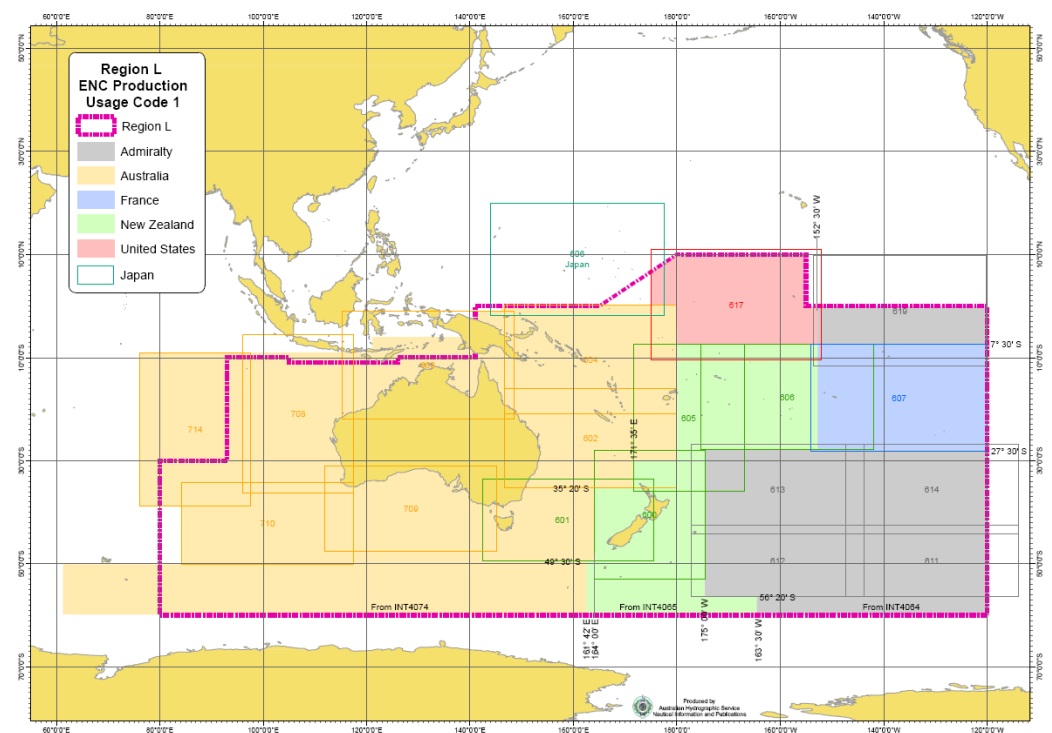


Figure 3: Navigation purpose 1 (overview)

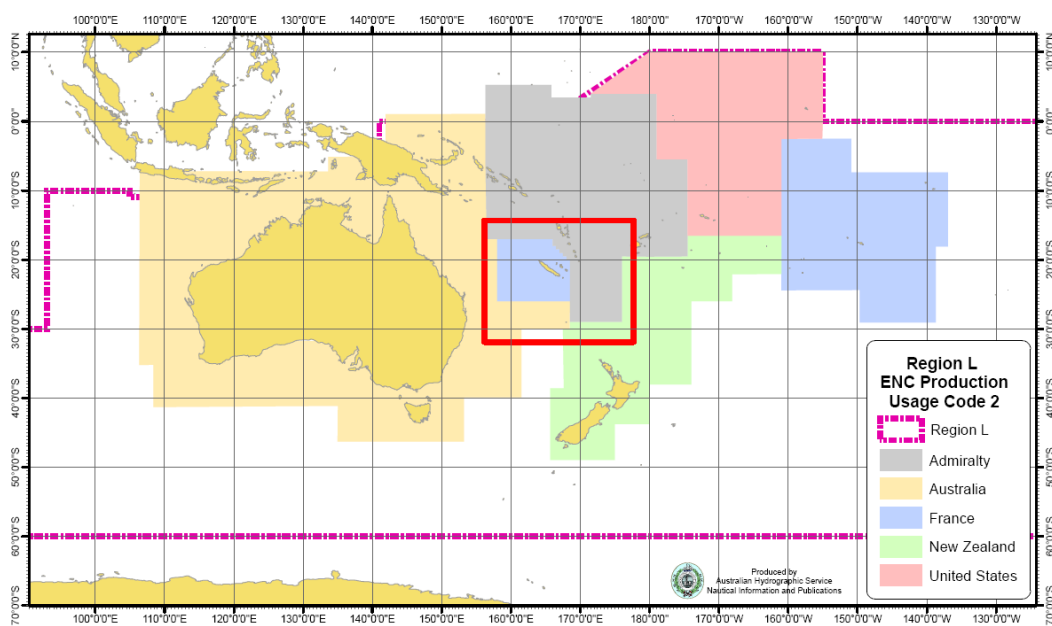


Figure 4: Navigation purpose 2 (general)

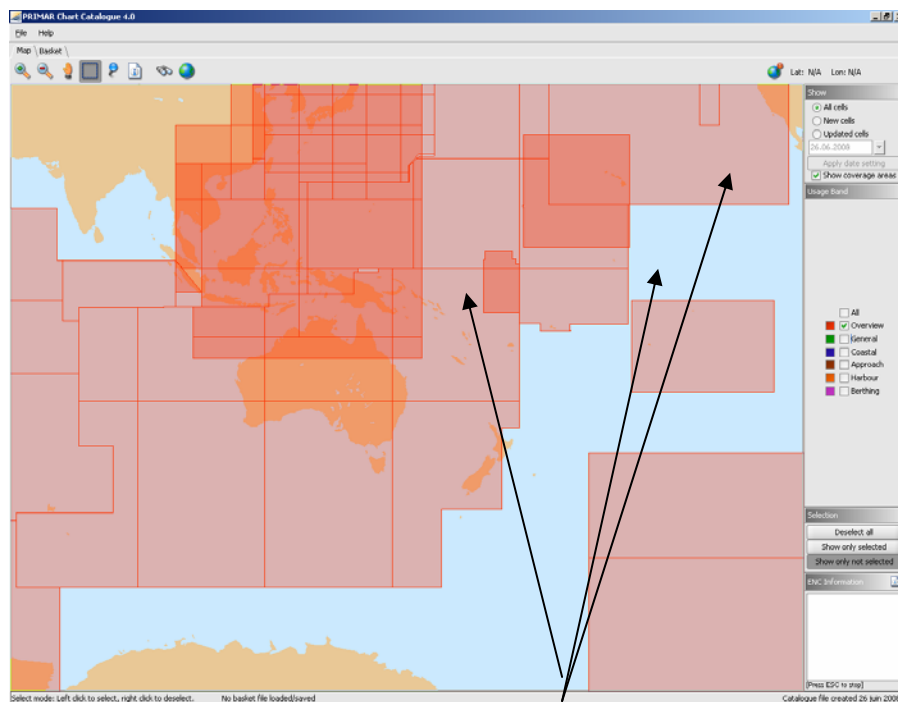


Figure 5: Overlapping data in navigation purpose overview (from West to East: between KR/AUS, GB/AUS, and JP/US cells)

### C - Overall coverage – extracted from S55

Figures in the following table are the percentages of waters covered with ENC's. They are extracted from S55 publication, updated 5<sup>th</sup> June 2008.

Note: some information in S55 has not been updated since 2003.

Nation / Area	Offshore passage / small scale	Landfall, coastal passage / medium scale	Approaches, ports / large scale	comment
Australia	0	6	6	
Cook Islands	0	0	0	Data provided by NZ
Fiji	0	0	0	Data provided by UK
France – French Polynesia	0	7	3	
France – New Caledonia	0	0	2	
France – Wallis and Futuna	0	0	0	
Kiribati	0	0	0	Data provided by UK
Nauru	0	0	0	Data provided by UK

New Zealand	0	0	0	About to start the release of ENC's
Papua New Guinea	0	0	0	Outdated figures (2004) - data provided by Australia
Samoa	0	0	0	Data provided by NZ
Solomon Islands	0	0	0	
Tokelau	0	0	0	Data provided by NZ
Tonga	0	0	0	Data provided by NZ
Tuvalu	0	0	0	Data provided by UK
UK - Pitcairn	0	0	0	
USA – American Samoa	0	0	0	Data provided by NZ
USA – Howland and Baker Islands	0	0	0	
USA – Jarvis Island	0	0	0	
USA – Kingman Reef & Palmyra Isla	0	0	0	
Vanuatu	0	0	0	Data provided by UK

#### D- Regional co-operation in surveying and chart production

Australia has a close relationship and a chart recompilation programme with PNG which includes ENC's.

As indicated at the 8th SWPHC meeting, its proposed survey programme will enable New Zealand to create ENC's of the major shipping routes and harbours in Tonga and Samoa.

As part of the Capacity Building 2008 Programme, technical and advisory visits have been also planned to PNG and Fiji in order to give advice on ENC production.

#### E- Recommendations

In accordance with SWPHC CL1/2008, it is recommended that SWPHC continues to identify the coverage gaps and coordinates the ways and means to fill them based on a priority charting plan, bearing in mind the IHO goals and IMO carriage requirements for ECDIS which imply adequate coverage of HSC and INT shipping routes (including cruise lines). This may need assistance for IHO and non-IHO members who do not still have the capacity to assume their SOLAS obligations...In any case, for large scale ENC coverage, this charting plan relies on the establishment of a prioritised survey plan for the remote islands.

## 6. NORTH INDIAN OCEAN HYDROGRAPHIC COMMISSION

### Background

- 1 This short report to WEND11 on ENC production activities in the NIOHC region, is provided as requested in WEND Letter 1 of 2008 and in accordance with Decision 17.a of the XVIth IH Conference, which included that “..... *Regional Hydrographic Commissions should report annually to WEND*”.

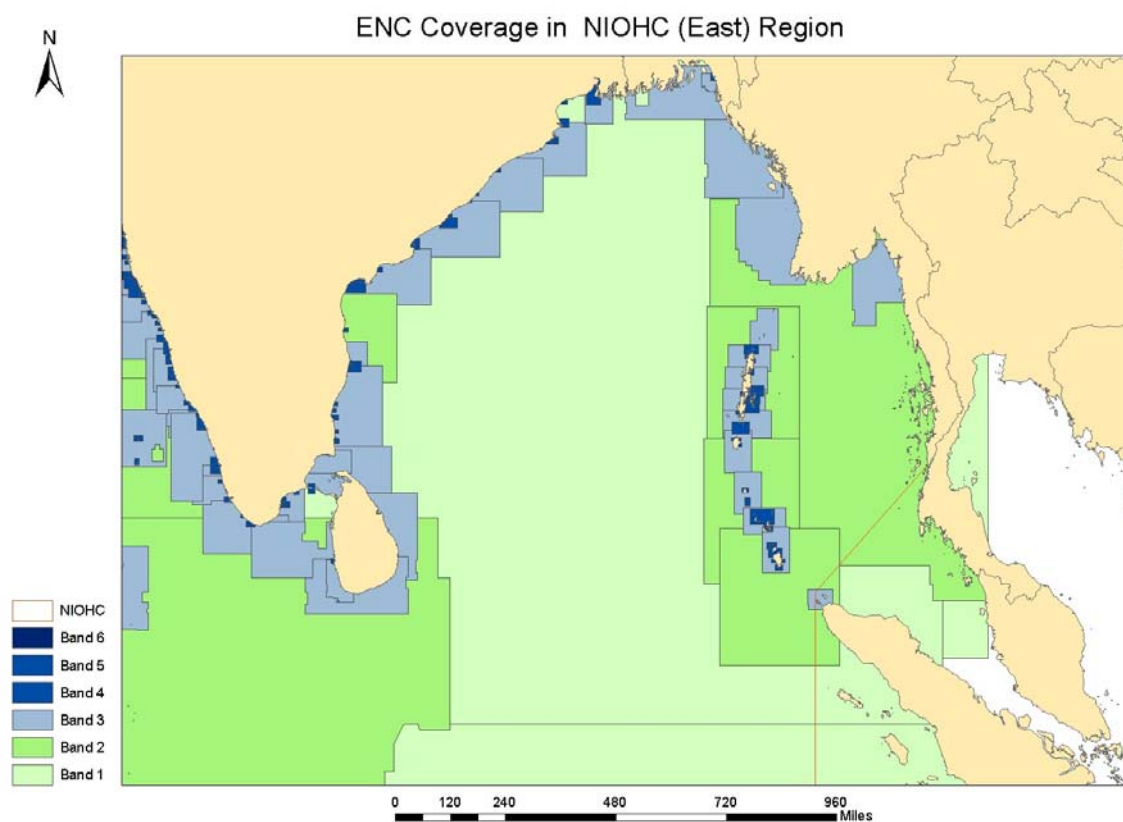
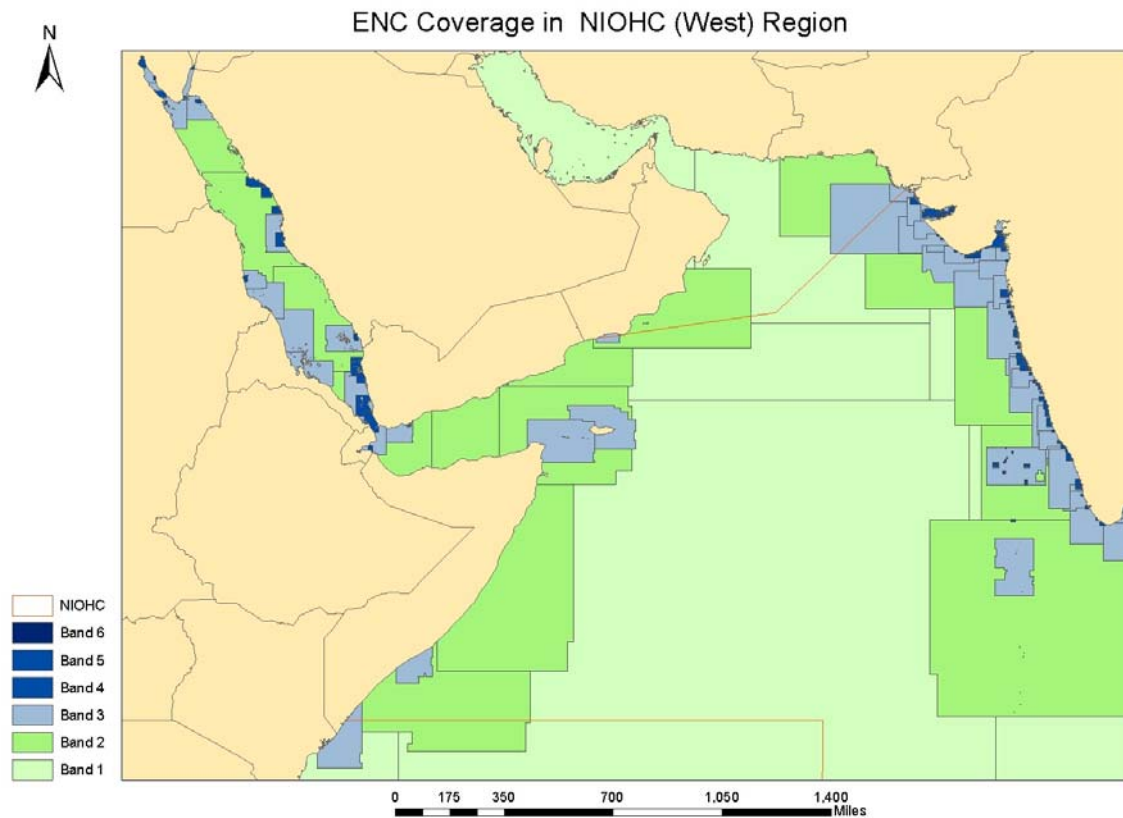
### ENC Issues

1. Issues of ENC coverage, production, availability and consistency have been addressed in the two NIOHC meetings held since the WEND10 in 2006. At the 2007 meeting the WEND Task Group Chair noted that the ENC scheme proposed was in accord with WEND Principles.
2. The Commission identified a number ways to expedite ENC production in the NIOHC region noting that cooperation between MS is a key element in this. It was agreed that where possible ENCs should be based on INT charts and production should be carried out by the INT producer. Member States currently without the capacity to produce ENCs should seek assistance from other NIOHC members.
3. It was agreed that ENCs should be made available through multiple integrated services, as required by the WEND principles, either by joining RENC or by negotiating separate agreements with the existing data servers. The role of RENCs in improving ENC consistency was recognised.

### ENC Coverage

Facilitated by NIOHC decisions, ENC coverage has increased steadily within the region during the period. Major East-West trade routes cross, and 36 of the world's top 800 ports are located in, the region. Approximately 90% of these ports and routes are now covered. The UK has produced 'infill' ENCs for nations that currently have no production capacity and to ensure full coverage at small scales (diagrams showing this coverage are available in the NIOHC pages of the IHO website). It is expected that full coverage will be achieved by mid 2009.

The accompanying diagrams show the current status of ENC availability in the NIOHC region. The diagrams show that there is complete coverage of the region at the overview / general usage bands and substantial coastal usage band coverage where this is most needed. The scale of the diagrams makes it difficult to appreciate coverage of the larger scale ENCs; a spreadsheet providing details of all the ENCs will be made available on the NIOHC pages of the IHO website.



Prepared by Chair of NIOHC July 2008



