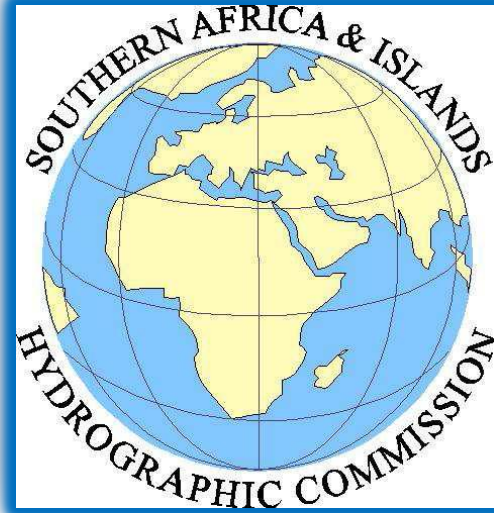


WORLDWIDE ENC DATABASE WORKING GROUP



SAIHC REGION H Report to WENDWG-11

WENDWG-11 VTC 01 – 17-18 February 2021

Region H: Status of ENC coverage

257 ENCs covering SAIHC Region H

Number of ENCs per Usage Band

Berthing UB6 = 21

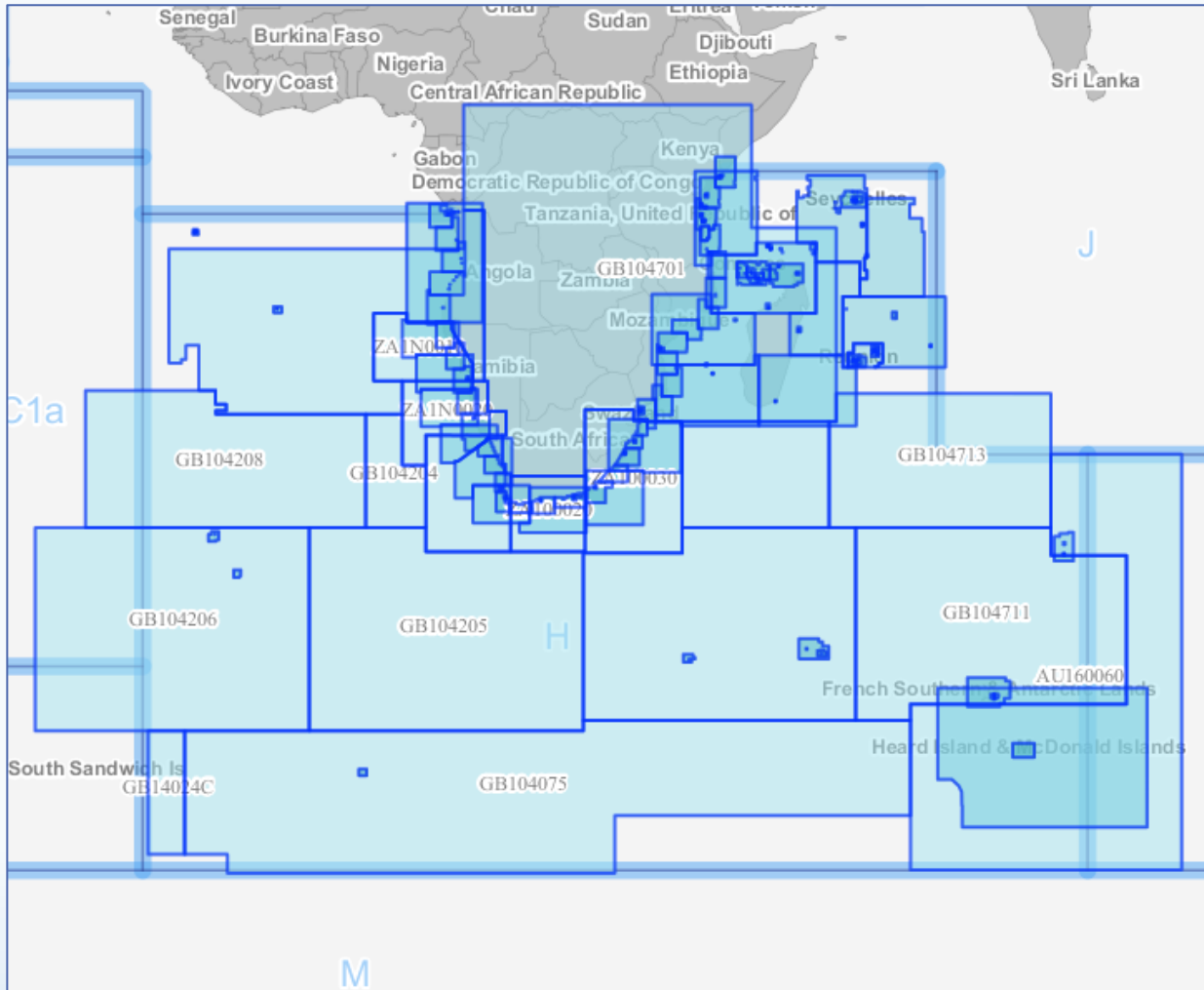
Harbour UB5 = 68

Approach UB4 = 74

Coastal UB3 = 55

General UB2 = 21

Overview UB1 = 18



Region H: ENC Overlaps

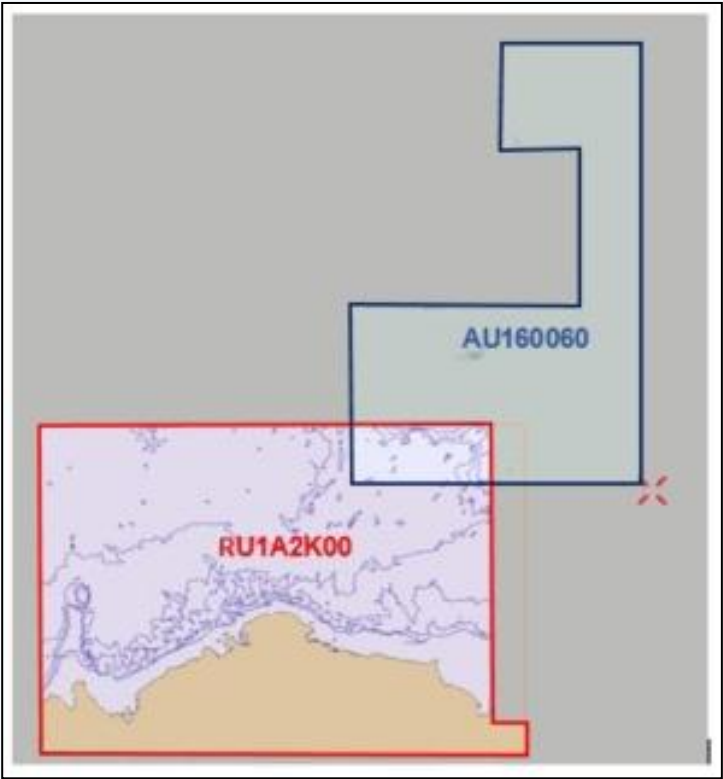
Summary of current live overlaps in Region H.

STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC	SAIHC/HCA	RU1A2K00	AU160060	1	LOW
LIVE	IC-ENC - PRIMAR	SAIHC	GB54232A	IN52520A	5	LOW
LIVE	IC-ENC - PRIMAR	SAIHC	GB500722	IN52551A	5	MEDIUM
				IN52552W		MEDIUM
LIVE	IC-ENC - PRIMAR	SAIHC	GB502758	IN52510B	5	MEDIUM
				IN52511A		MEDIUM
LIVE	IC-ENC-PRIMAR	SAIHC	GB54232A	IN62516D	5/6	MEDIUM
LIVE	IC-ENC	SAIHC	GB40718C	IN52555I	4/5	MEDIUM
LIVE	IC-ENC	SAIHC	GB50663A	IN62693T	5/6	MEDIUM
LIVE	IC-ENC	SAIHC	GB54231A	IN62524P	5/6	MEDIUM
LIVE	IC-ENC	SAIHC	GB54232A	IN62517N	5/6	MEDIUM

Region H: ENC Overlaps

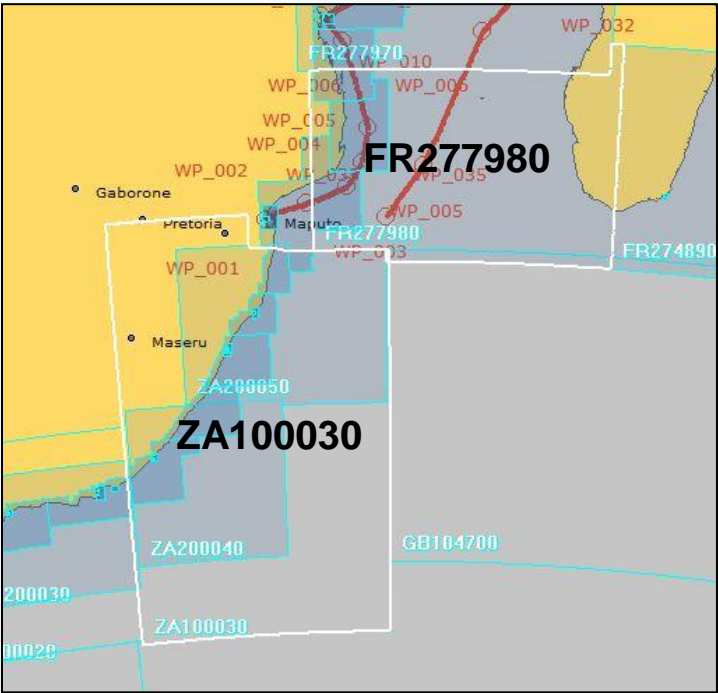
STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC	SAIHC/HCA	RU1A2K00	AU160060	1	LOW

Overlap unresolved



Region H: ENC Overlaps

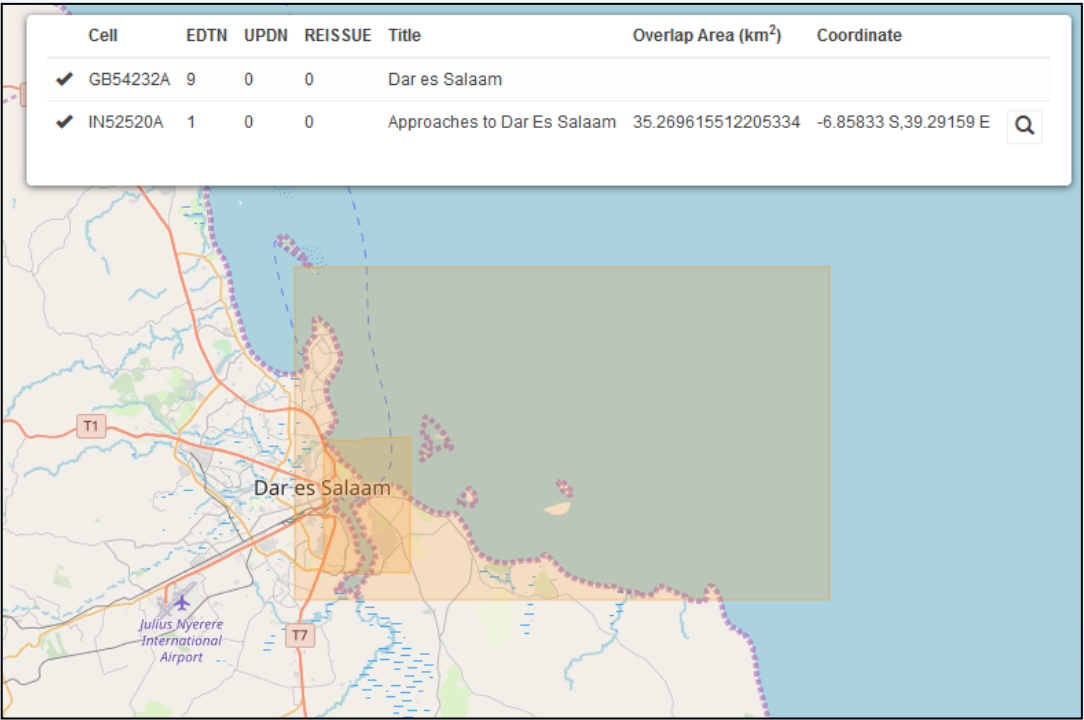
STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC/PRIMAR	SAIHC	ZA100030	FR277980	1/2	LOW



Overlap resolved January 2021

Region H: ENC Overlaps

STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC - PRIMAR	SAIHC	GB54232A	IN52520A	5	LOW

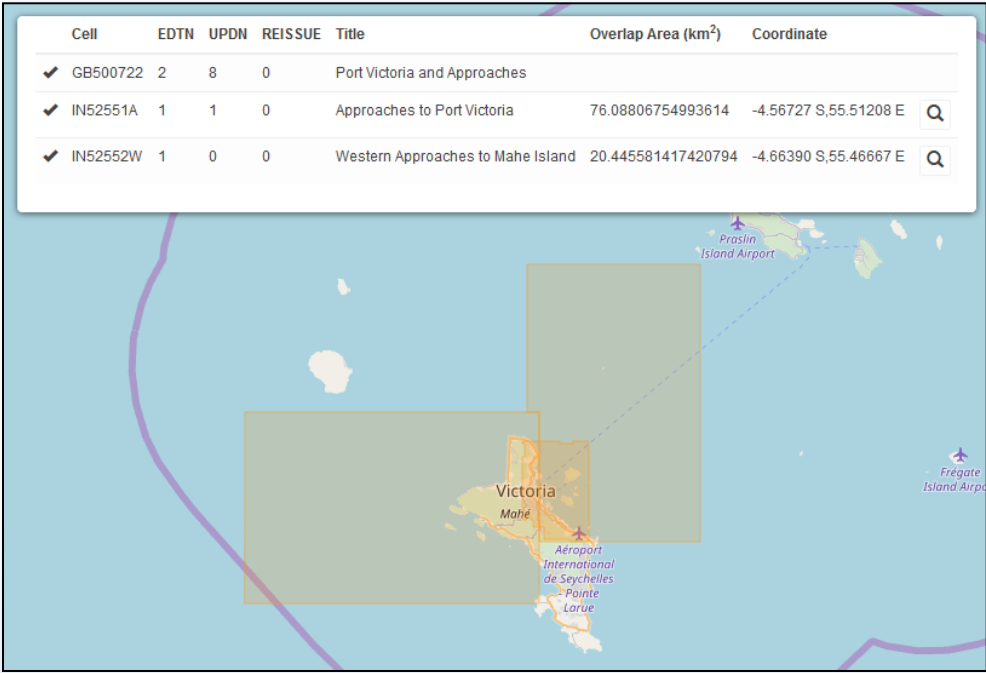


Region: Tanzania (Dar es Salaam):

Unresolved overlap

Region H: ENC Overlaps

STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC - PRIMAR	SAIHC	GB500722	IN52551A IN52552W	5	MEDIUM

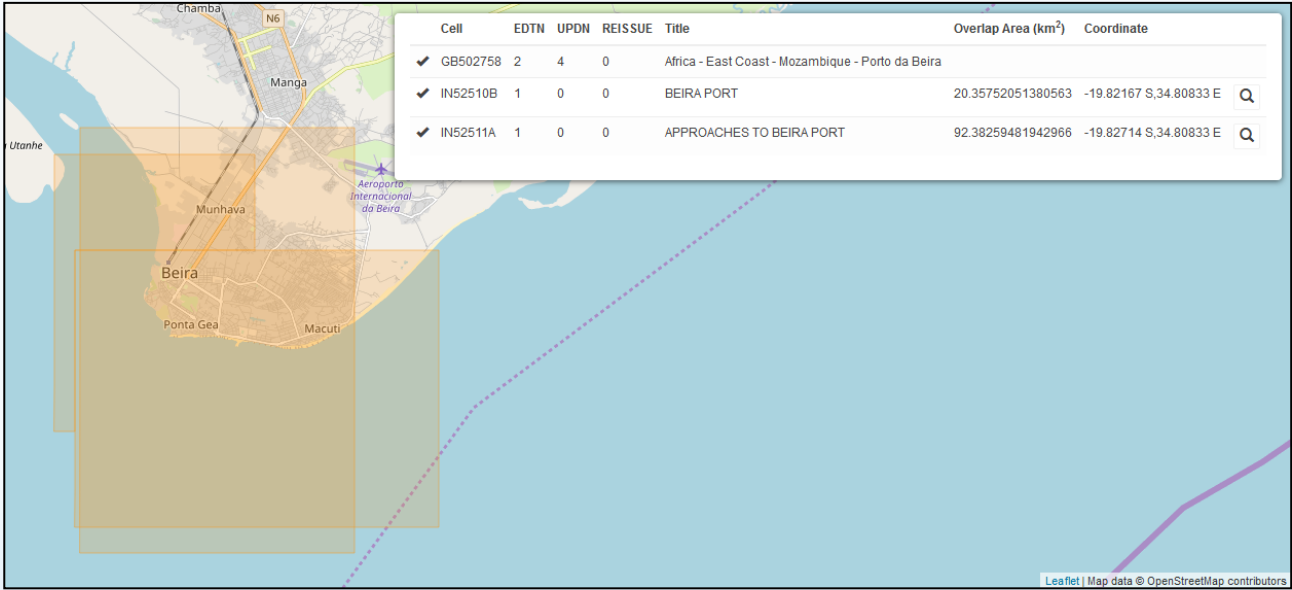


Region: Seychelles

Unresolved overlap

Region H: ENC Overlaps

STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC - PRIMAR	SAIHC	GB502758	IN52510B IN52511A	5	MEDIUM

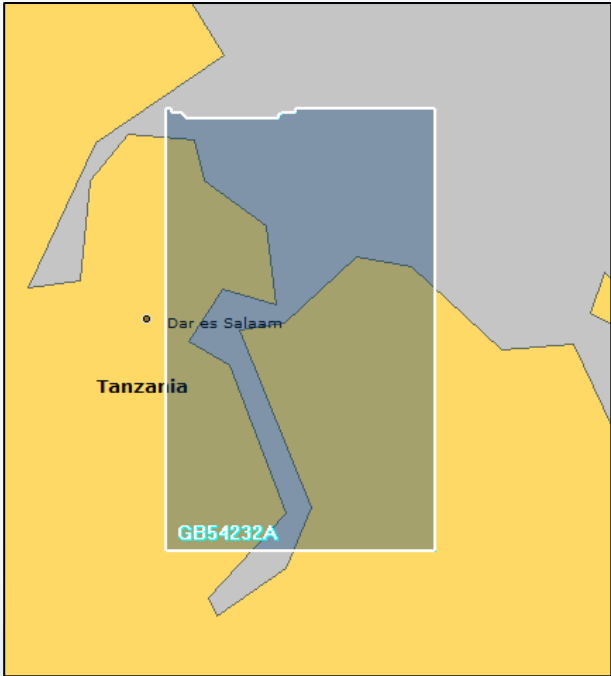


Region: Mozambique

Unresolved overlap

Region H: ENC Overlaps

STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC - PRIMAR	SAIHC	GB54232A	IN62516D	5/6	MEDIUM

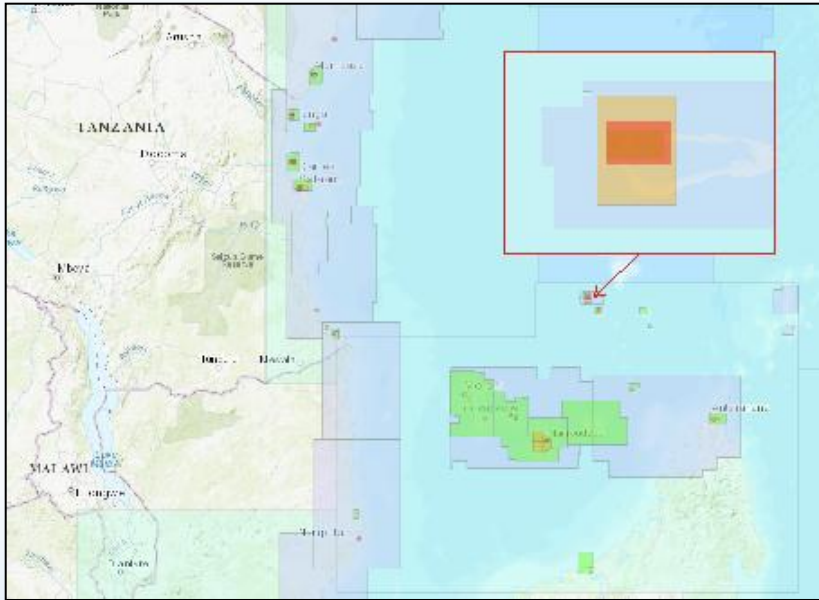


Region: Tanzania

Unresolved overlap

Region H: ENC Overlaps

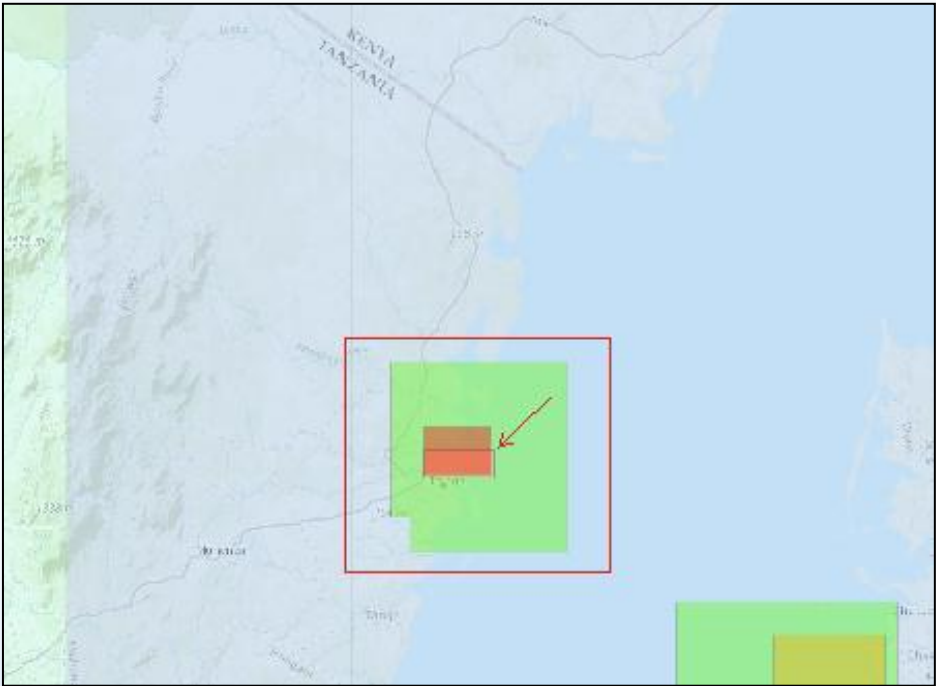
STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC - PRIMAR	SAIHC	GB40718C	IN52555I	4/5	MEDIUM



Overlap covers Aldabra Island and surrounding coastal waters.

Region H: ENC Overlaps

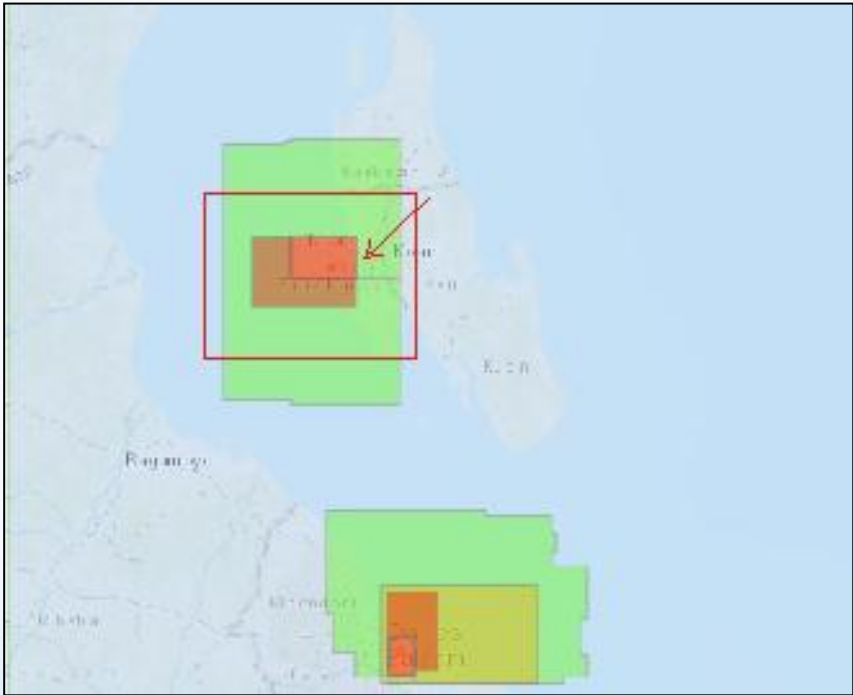
STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC - PRIMAR	SAIHC	GB50663A	IN62693T	5/6	MEDIUM



Overlap located in the vicinity of Tanga harbour. High level of traffic.

Region H: ENC Overlaps

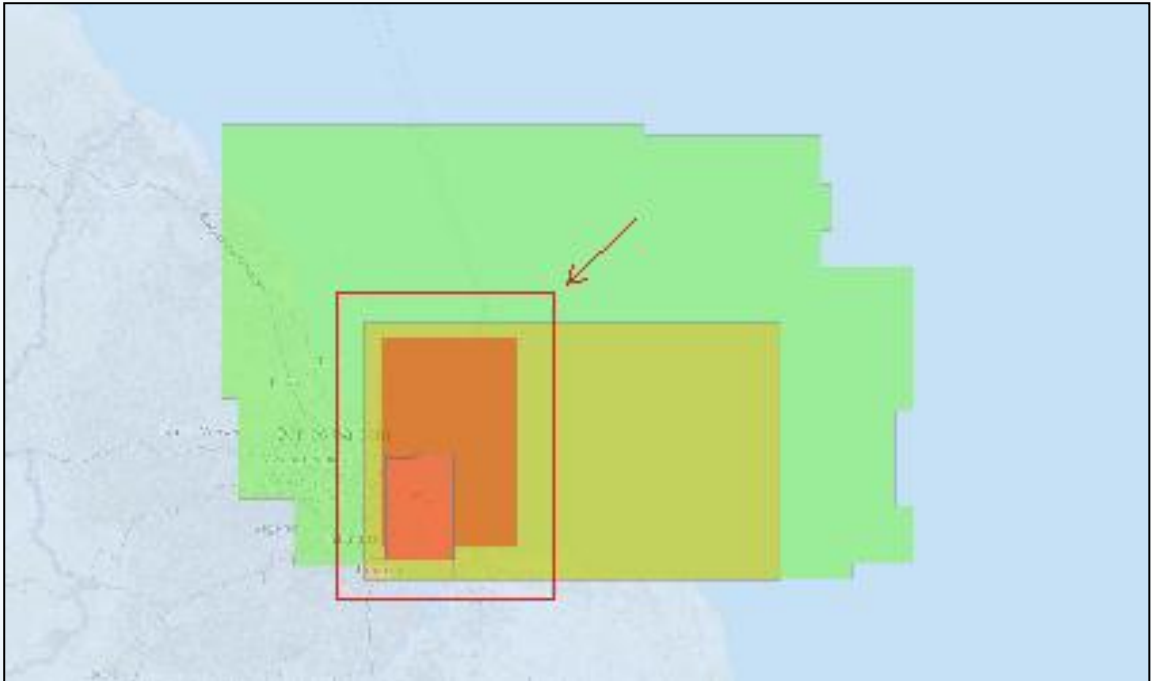
STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC - PRIMAR	SAIHC	GB54231A	IN62524P	5/6	MEDIUM



Overlap located in the vicinity of Zanzibar City harbour.
High level of traffic.

Region H: ENC Overlaps

STATUS	RENC Membership	RHC	ENC 1	ENC 2	Usage Band	Overall Severity of Risk
LIVE	IC-ENC – PRIMAR	SAIHC	GB54232A	IN62517N	5/6	MEDIUM



Overlap located in the vicinity of Dar es Salaam harbour. High level of traffic.



UK Hydrographic
Office

SAIHC ENC Scheme

Gridded ENC Option

James Timmins, UKHO

September 7, 2020



International Hydrographic Organization
Organisation Hydrographique Internationale

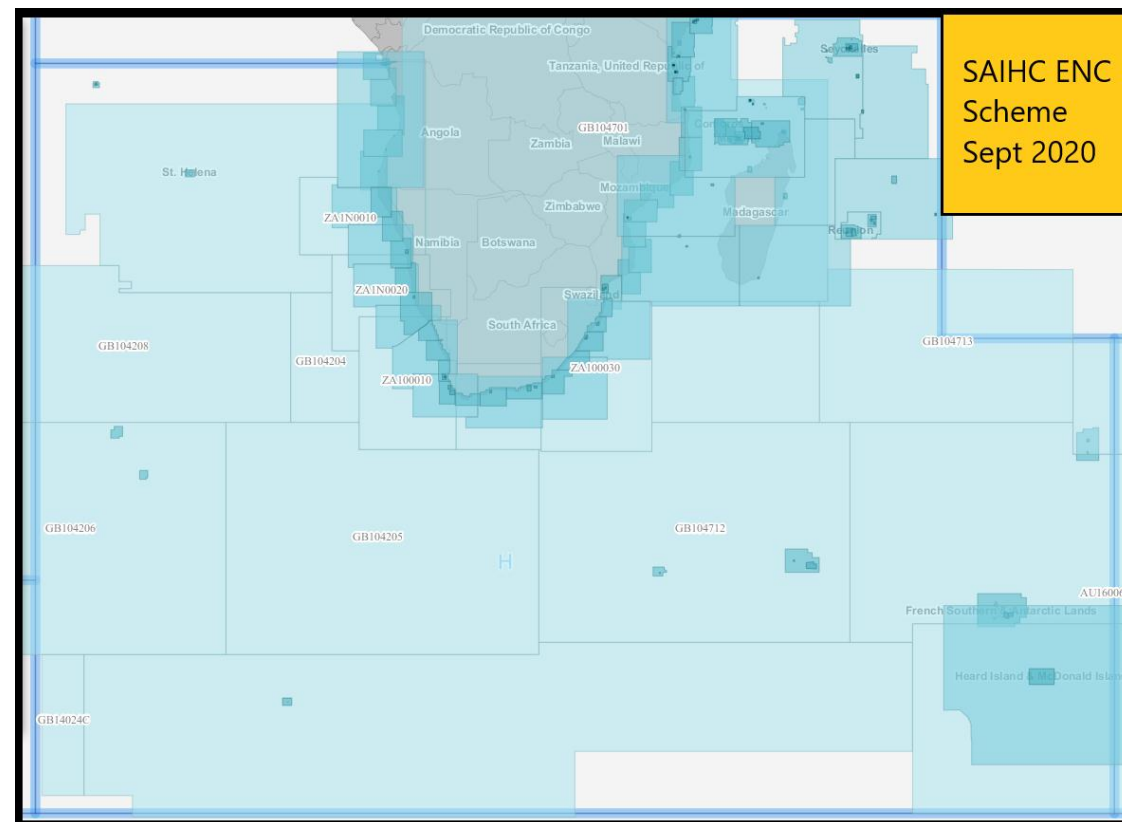
Southern African and Islands Hydrographic Commission



Existing SAIHC ENC Scheme

Traditional scheme evolved from paper chart limits

- Closely follows paper chart scheming
- Focused on ports and approaches
- Cells extents and shapes are varied
- No systematic structure to the scheme
- Does not contain 'richer' data such as higher density contours



Gridded ENCs

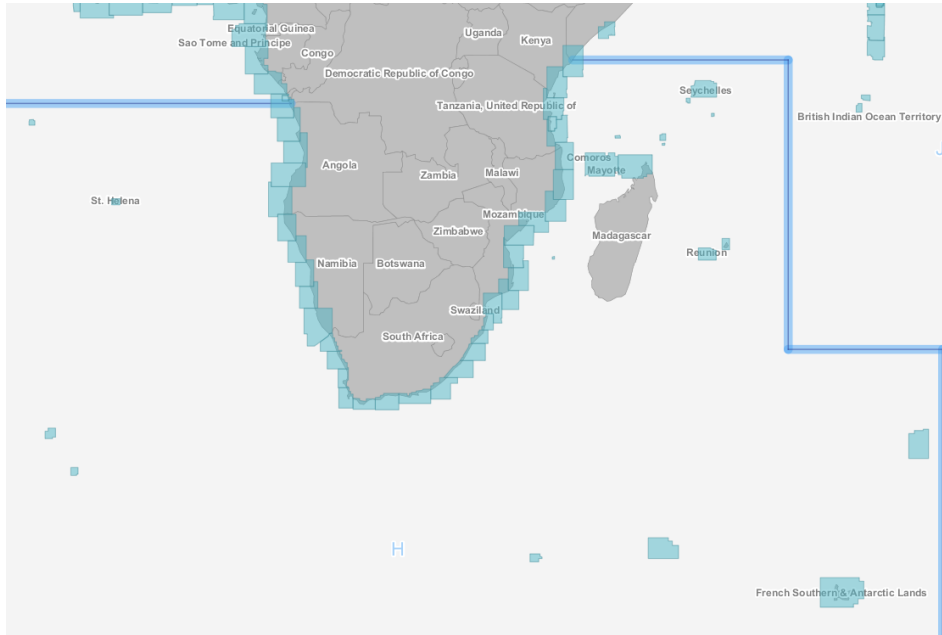
Gridded ENC scheme not based on evolved paper charts

- Cells follow a logical system and extents, shapes are uniform
- Cells are smaller extent and can support 'richer' data (higher density contours)
- Gridded cells could support automated paper chart production in the future
- Gridded data packages easier to manage as a scheme

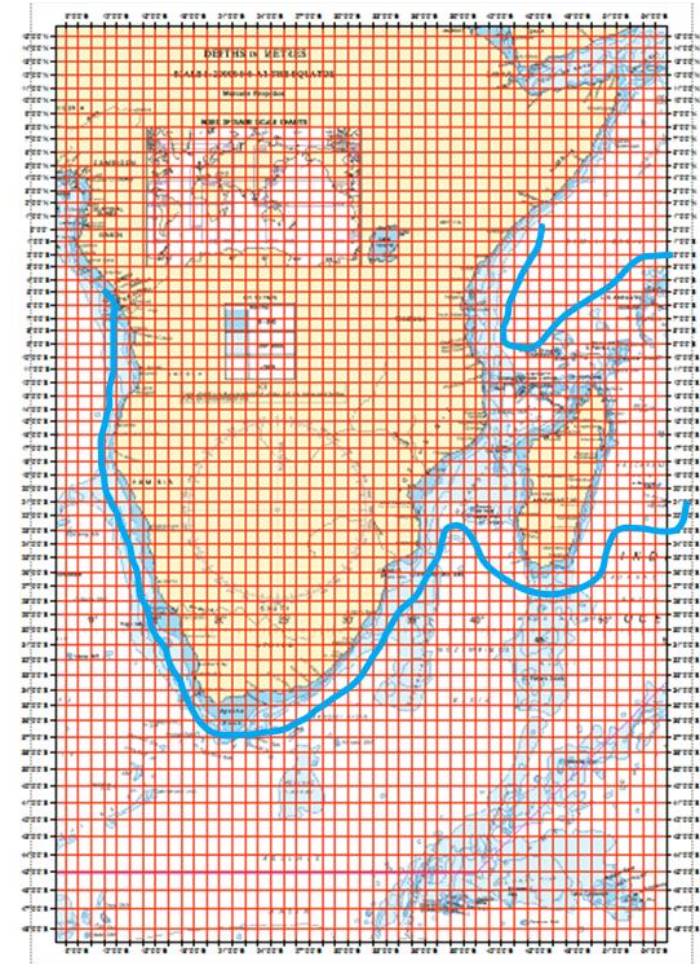
Things to consider

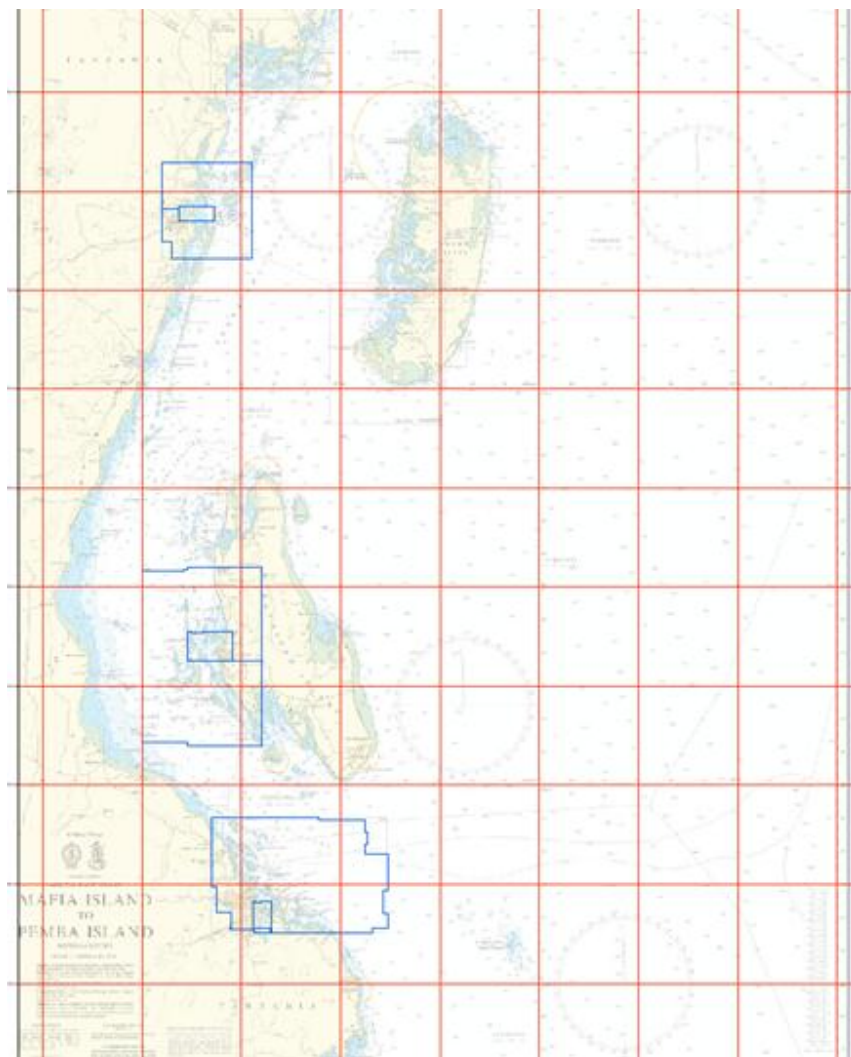
- Effort needed to rescheme existing cells
- Regional grid or individual country grids
- Cell splits across International boundaries and ports
- Grid cell size, origin and naming convention
- Availability of sufficient bathymetric data
- Would users purchase all the cells needed for safe navigation?
- SOLAS vessels follow clear routes, many grid cells may have low user requirement

Grid options



The coastal ENC coverage (UB3) could be a 1° x 1° grid. The coast and main routes could be prioritised before other areas .





SAIHC ENC Scheme – Gridded ENC Option

Example of Approach coverage (UB4) shown in red against existing ENC (UB4) ENCs shown in blue. This grid uses a $0.25^{\circ} \times 0.25^{\circ}$ cell size.

Recommendations

- SAIHC ICCWG monitors global developments in ENC gridding as IHO members start to investigate further and make advances.
- Consider if SAIHC areas that do not have ENCs at the moment would benefit from gridded ENCs instead of following paper chart limits.
- Undertake further research to understand how many gridded cells could be required and consider advantages and disadvantages in closer detail.

Challenges

- Increasing ENC overlaps within Region H
- Unresolved ENC overlaps surpassing the 1 year clock
- Due to existing overlapping ENCs in the Region, the proposal to introduce a gridded ENC option into the existing scheme for future ENCs, may introduce further overlapping issues and complications.

Actions requested of WENDWG

WENDWG is invited to note the report from SAIHC.