



S-100 Impementation in Sweden

Agenda item NHC-67 C.1E

IHO priorities

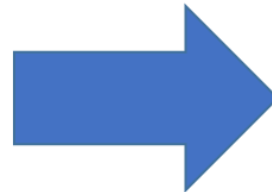
Phase 1 / Route Monitoring

Phase 1 Route Monitoring Mode

- S-101 ENC
- S-102 Bathymetry
- S-104 Water Level
- S-111 Surface Currents
- S-124 Navigational Warnings
- S-129 UKC Management

Critical Framework

- IHO Geospatial Information Registry
- S-98 Interoperability Specification
- S-100 Universal Hydrographic Data Model
- S-128 Catalogue of Nautical Products
- S-164 Test Data Set for S-100 and ECDIS Type Approval



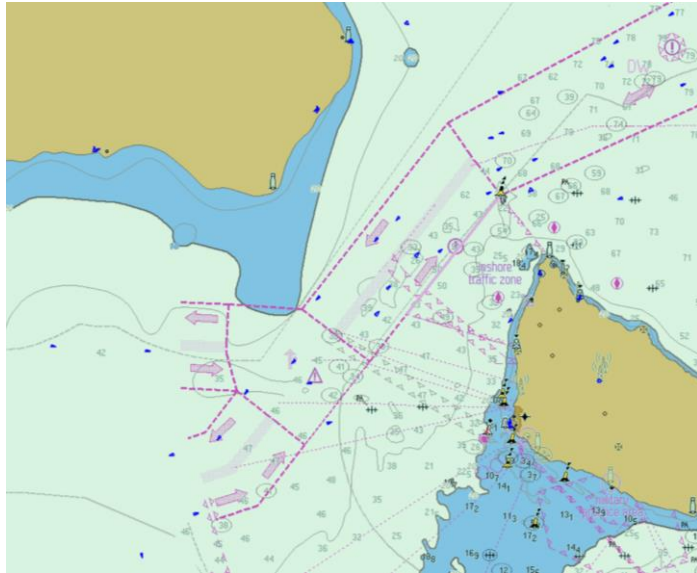
Phase 2 / Route Planning

Phase 2 Route Planning Mode

- S-122 Marine Protected Areas
- S-123 Marine Radio Services
- S-125 Marine Aids to Navigation (AtoN)
- S-126 Marine Physical Environment
- S-127 Marine Traffic Management
- S-131 Marine Harbour Infrastructure
- S-411 Ice Information (WMO)
- S-412 Weather and Wave Hazards (WMO)

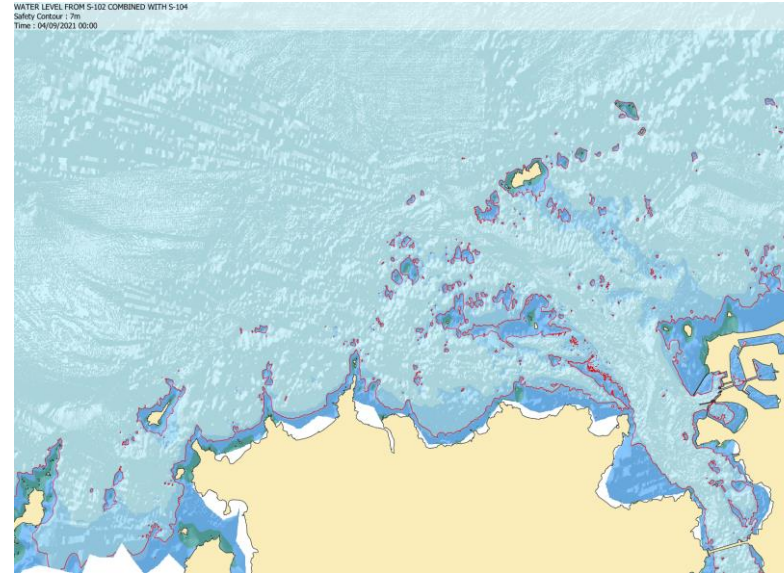
+ S-100 Products used in
Monitoring Mode

The first priority S-100 products in Sweden



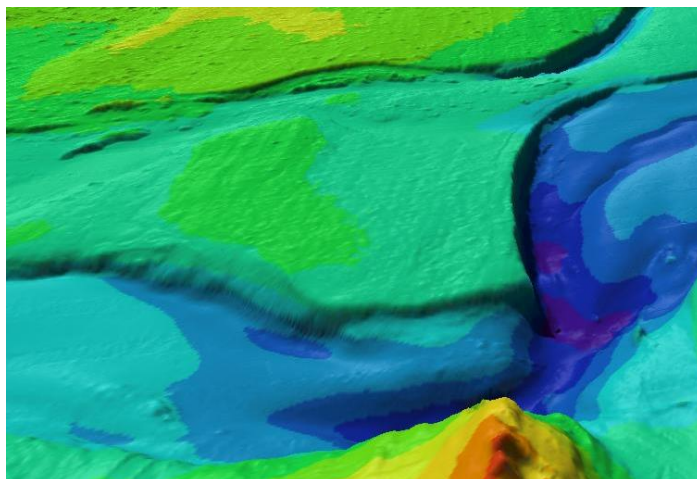
ENC S-101

to establish the S-100 base layer so SE ENCs can be interoperable with other S-100 layers



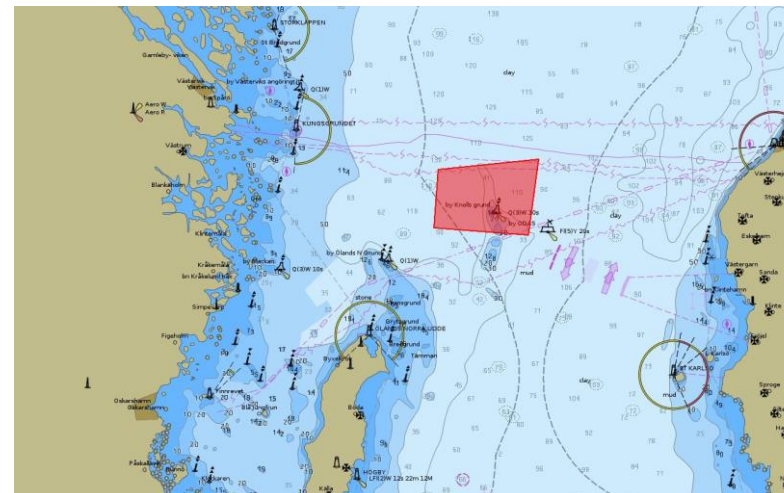
Water Level S-104

to provide Water Level Adjustment in navigational systems



Bathymetry S-102

to facilitate generation of unique safety contours



Navigational Warnings S-124

to fulfil the MSI requirements in S-100

S-100 timeline in Sweden

Products	2024	2025	2026	2027	2028	2029	2030	2031	2032
ENC S-101									
Bathymetry S-102									
Ensuring confidentiality rules for S-102									
Catalogue of Nautical Products S-128 via PRIMAR									
Water Level S-104 (in cooperation with SMHI*)									
Surface Currents S-111 (in cooperation with SMHI*)									
Navigational Warnings S-124									
Marine Protected Areas S-122 (in cooperation with SwAM*)									
Marine Radio Services S-123									
Marine Traffic Management S-127									
Marine Harbour Infrastructure S-131									

*SMHI – Swedish Meteorological and Hydrological Institute, SwAM – Swedish Agency Marine and Water Management

Other relevant S-100 products still outside the timeline

- Status AtoN, S-125. An S-201 (IALA) compatible AtoN database will be developed at SMA to secure a future workflow to ENC's S-101 and possibly S-125
- Ice Information, S-411 (WMO), in cooperation with SMHI
- Weather and Wave Hazards, S-412 (WMO), in cooperation with SMHI
- Weather and Wave Conditions, S-413 (WMO), in cooperation with SMHI
- Weather and Wave Observations, S-414 (WMO), in cooperation with SMHI
- Route Plans, S-421 (IEC). Pilot routes, Ice routes, etc.
- S-212 (IALA), VTS Digital Service?
- Others?

It is expected that UKC Management S-129 will be made available through the commercial market.

Strategies for implementation

- Participation in relevant IHO working groups and also IMO and IALA.
- Interaction with other relevant Swedish authorities. National S-100 Council? Navy, SMHI, SwAM (Havs- och Vattenmyndigheten), Swedish Transport Administration (Trafikverket), Swedish Transport Agency (Transportstyrelsen)
- Coordinate implementation with other neighbouring countries mainly in the Baltic Sea (BSHC), but also the North Sea (NSHC). The Nordic Hydrographic Commission (NHC) can also be used for joint Nordic implementation.
- EU funding through Baltic Sea e-Nav for implementation of ENC S-101, depth data S-102 and water level S-104 (Finland) in the Baltic Sea.
- Project results must be delivered in a structured manner to the ordinary organization for implementation and future maintenance.



Questions or comments?

NHC-67, Malmö Sweden, 11 – 12 April 2024