# Geo Features – Areas, limits

## International boundaries and national limits (see S-4 – B-440)

The United Nations Convention on the Law of the Sea, 1982 came into force on 16 November 1994. UNCLOS contains navigational provisions as well as provisions for determining the limits of various maritime zones. These provisions are binding to all states that have ratified the Convention. For technical aspects of UNCLOS, see IHO publication C-51.

IHO Member States should show, on selected series of their ENCs, their own baseline and maritime limits in accordance with UNCLOS (former IHO Technical Resolution B2.35).

The mariner may be interested in the exact location of international maritime boundaries for two principal reasons:

* When crossing a boundary they could be subject to different laws and regulations which may affect their navigation, for example buoyage systems, pilotage regulations, fishing rights, reporting procedures, pollution regulations.
* Where a boundary passes through groups of offshore islands they may wish to know upon which side of the boundary a particular island falls.

## Maritime jurisdiction areas

International boundary

Territorial Sea *(bdgib)*

Exclusive Economic Zone *(defgd)*

Fishery Zone *(cdghc)*

National territory *(mdgkm)*

Territorial Sea Baseline (drying line)

Territorial Sea Straight Baseline

12 M

*a*

*b*

*c*

*d*

*e*

*f*

*g*

*h*

*i*

*j*

*k*

*m*

The clauses in Section 16 below provide guidance for the encoding of maritime jurisdiction areas. Occasionally, these “areas” may actually be defined as linear due to international treaties, or the areas may not be fully defined and it may therefore be necessary to encode the boundary as a linear feature. Clause X.X defining features permitted for use in ENC and their geometric primitives does not allow many of the feature classes relating to maritime jurisdiction areas to be encoded as type curve.

If it is required to encode a linear maritime jurisdiction feature, it must be done using the corresponding feature class as outlined in Section 16 below. If the “curve” primitive is not permitted for the related feature class, the linear maritime jurisdiction feature must be encoded as a “very narrow” feature of type surface, and by masking all the edges of the area that are not relevant (that is, are not along the reference line – see clause X.X). **Note that this method must not be used where an area can be defined**.

The “very narrow surface” should be a surface having an edge corresponding to the reference line and be about 0.2mm in width at the maximum display scale of the ENC data. Caution notes for such areas must be encoded using an associated instance of the information class **Nautical Information** (see clause X.X), complex attribute **information**.

### Maritime jurisdiction areas in dispute

In accordance with Article 55 of the United Nations Convention on the Law of the Sea (UNCLOS – 10 December 1982), a Coastal State’s Territorial Sea Area and Exclusive Economic Zone must not overlap. Occasionally, small areas at the boundary of two or more Coastal States may be in dispute regarding the establishment of maritime jurisdiction, which may result in a small section of Territorial Sea overlapping an EEZ in the disputed area.

Where issues of maritime jurisdiction between two or more Coastal States are in dispute, the proposed Territorial Sea (**Territorial Sea Area**) of one Coastal State may overlap the proposed EEZ (**Exclusive Economic Zone**) of another Coastal State. In this case, the disputed area should be encoded with separate **Territorial Sea Area** and **Exclusive Economic Zone** features, with Boolean attribute **in dispute** set to *True* and the mandatory attribute **nationality** populated with the country codes (conforming to ISO 3166) of the disputing states (see clause X.X).

## Anchorage area

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| IHO Definition:  **ANCHORAGE AREA**. An area in which vessels or seaplanes anchor or may anchor. (Adapted from IHO Dictionary – S-32). |
| **S-101 Geo Feature: Anchorage area (ACHARE)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Category of anchorage  | (CATACH) | 1 : unrestricted anchorage2 : deep water anchorage3 : tanker anchorage4 : explosives anchorage5 : quarantine anchorage6 : seaplane anchorage7 : small craft anchorage8 : small craft mooring area9 : anchorage for periods up to 24 Hours10 : anchorage for a limited period of time14 : waiting anchorage15 : reported anchorage | EN | 0,\* |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Restriction | (RESTRN) | 2 : anchoring restricted3 : fishing prohibited4 : fishing restricted5 : trawling prohibited6 : trawling restricted8 : entry restricted9 : dredging prohibited10 : dredging restricted11 : diving prohibited12 : diving restricted13 : no wake15 : construction prohibited16 : discharging prohibited17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted23 : cargo transhipment (lightening) prohibited24 : dragging prohibited27 : speed restricted39 : swimming prohibited | EN | 0,\* |
| Status  | (STATUS) | 1 : permanent2 : occasional3 : recommended5 : periodic/intermittent6 : reserved7 : temporary8 : private9 : mandatory14 : public | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 10, 12.1-9, 14; Q 44Anchorages (see S-4 – B-431.1; B-431.3 and B-431.7)Where the limits of anchorages are defined by a regulatory authority (for example harbour authority) they must be shown on the largest maximum display scale ENC data. They may also be shown on other maximum display scale ENC datasets where useful, for example, for planning purposes.If it is required to encode an anchorage area, including anchorages for seaplanes, it must be done using the feature **Anchorage Area**.Remarks:* The complex attribute **feature name**, sub-attribute **name** is used to encode the name and/or number of the **Anchorage Area**.
* An associated instance of the information class **Nautical Information** (see clause X.X), complex attribute **information** may be used to provide additional information about the category of anchorage, where required.
* Individual recommended anchorages without defined limits should be encoded as **Anchorage Area** features of type point, with attributes **category of anchorage** = *1* (unrestricted anchorage) and **status** = *3* (recommended).
* Areas with numerous small craft moorings may be encoded as **Anchorage Area** features of type surface, with **category of anchorage** = *8* (small craft mooring area). For the encoding of mooring buoys, see clause X.X.
* If it is required to encode an anchorage which may be used for a period of not more than 24 hours, it must be done using **category of anchorage** = *9* (anchorage for periods up to 24 hours).
* If it is required to encode an anchorage with a specific, limited time period, it must be done using **category of anchorage** = *10* (anchorage for limited period of time). The specific limit of time should be encoded using an associated instance of the information class **Nautical Information** (see clause X.X), complex attribute **information**, sub-attribute **text** (for example *Anchorage limited to 12 hours*).
* Areas where anchoring is prohibited must be encoded, where required, as **Restricted Area Navigational** (see clause X.X) with attribute **restriction** = *1* (anchoring prohibited).

Distinction: Anchor berth; mooring/warping facility. |

## Anchor berth

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| IHO Definition: **ANCHOR BERTH**. A designated area of water where a single vessel, seaplane, etc... may anchor. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.6, November 2000). |
| **S-101 Geo Feature: Anchor berth (ACHBRT)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Category of anchorage  | (CATACH) | 1 : unrestricted anchorage2 : deep water anchorage3 : tanker anchorage4 : explosives anchorage5 : quarantine anchorage6 : seaplane anchorage7 : small craft anchorage8 : small craft mooring area9 : anchorage for periods up to 24 Hours10 : anchorage for a limited period of time14 : waiting anchorage | EN | 0,\* |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Radius | (RADIUS) |  | RE | 0,1 |
| Status  | (STATUS) | 1 : permanent2 : occasional3 : recommended4 : not in use5 : periodic/intermittent6 : reserved7 : temporary8 : private9 : mandatory14 : public | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 11.1, 11.2Anchor berths (see S-4 – B-431.2)Where the positions or limits of anchorages, including anchor berths, are defined by a regulatory authority (for example harbour authority) they must be shown on the largest maximum display scale ENC data. They may also be shown on other maximum display scale data where useful, for example, for planning purposes.If it is required to encode an anchor berth, it must be done using the feature **Anchor Berth**.Remarks:* The complex attribute **feature name**, sub-attribute **name** is used to encode the name and/or number of the **Anchor Berth**. If a group of anchor berths is known by a single common name, the name should be encode using a **Sea Area/Named Water Area** feature (see clause X.X) covering the area of the anchor berths.
* An associated instance of the information class **Nautical Information** (see clause X.X), complex attribute **information** may be used to provide additional information about the category of anchorage, where required.
* If an anchor berth is defined by a centre point and a swinging circle, it should be of type point, with the radius of the swinging circle encoded using the attribute **radius**.

Distinction: Anchorage area; berth; mooring/warping facility. |

## Seaplane landing area

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| IHO Definition: **SEAPLANE LANDING AREA**. A designated portion of water for the landing and take-off of seaplanes. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.152, November 2000). |
| **S-101 Geo Feature: Seaplane landing area (SPLARE)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Restriction | (RESTRN) | 1 : anchoring prohibited2 : anchoring restricted3 : fishing prohibited4 : fishing restricted5 : trawling prohibited6 : trawling restricted7 : entry prohibited8 : entry restricted9 : dredging prohibited10 : dredging restricted11 : diving prohibited12 : diving restricted13 : no wake15 : construction prohibited16 : discharging prohibited17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted22 : removal of historical artefacts prohibited23 : cargo transhipment (lightening) prohibited24 : dragging prohibited25 : stopping prohibited27 : speed restricted39 : swimming prohibited | EN | 0,\* |
| Status  | (STATUS) | 1 : permanent2 : occasional3 : recommended4 : not in use5 : periodic/intermittent6 : reserved7 : temporary8 : private9 : mandatory14 : public | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 13Seaplane landing areas (see S-4 – B-449.6)If it is required to encode a seaplane landing area, it must be done using the feature **Seaplane Landing Area**.Remarks:* If it is required to encode an area where seaplanes draw water for firefighting activities, this must be done using **Seaplane Landing Area**.
* If it is required to encode an anchorage for seaplanes, it must be done using an **Anchorage Area** feature (see clause X.X), with attribute **category of anchorage** = *6* (seaplane anchorage).

Distinction: Airport area; runway. |

## Dumping ground

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| IHO Definition: **DUMPING GROUND**. A sea area where dredged material or other potentially more harmful material, for example explosives, chemical waste, is deliberately deposited. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.59, November 2000). |
| **S-101 Geo Feature: Dumping ground (DMPGRD)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Category of dumping ground  | (CATDPG) | 2 : chemical waste dumping ground3 : nuclear waste dumping ground4 : explosives dumping ground5 : spoil ground6 : vessel dumping ground | EN | 0,\* |
| Date disused |  |  | TD | 0,1 |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Restriction | (RESTRN) | 1 : anchoring prohibited2 : anchoring restricted3 : fishing prohibited4 : fishing restricted5 : trawling prohibited6 : trawling restricted7 : entry prohibited8 : entry restricted9 : dredging prohibited10 : dredging restricted11 : diving prohibited12 : diving restricted13 : no wake17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted22 : removal of historical artefacts prohibited23 : cargo transhipment (lightening) prohibited24 : dragging prohibited25 : stopping prohibited27 : speed restricted | EN | 0,\* |
| Status  | (STATUS) | 1 : permanent2 : occasional4 : not in use6 : reserved7 : temporary | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 23, 24, 62.1, 62.2Dumping grounds (see S-4 – B-442; B-446 and B-446.1)Materials deliberately dumped at sea in specified areas (other than those associated with reclamation works) may be classified, according to their significance to the mariner, as follows:* + Materials which are generally dispersed before reaching the seabed, for example sewage sludge, are of little navigational significance and no charting action is usually required.
	+ Spoil from dredging operations or other works which might reduce charted depths significantly in the designated spoil ground.
	+ Harmful materials, including explosives and chemicals, which are likely to remain concentrated on the seabed.

Dumping of harmful materials is unlikely to affect depths substantially and such dumping grounds are encoded primarily as a warning against anchoring, trawling or other submarine operations.If it is required to encode a dumping ground, it must be done using the feature **Dumping Ground**.Remarks:* A **Dumping Ground** feature of type surface must be covered by features from Skin of the Earth as appropriate (**Depth Area** or **Unsurveyed Area**).
* Disused dumping grounds for harmful materialsare considered dangerous for an indefinite period and must therefore be encoded on the largest maximum display scale ENC datasets, with attribute **status** = *4* (not in use). The date when the area ceased to be used may be populated using the attribute **date disused**, if known.
* Within a spoil ground; if the depths within the area are liable to be very much less than charted after the discharge of spoil, they may be treated as unsurveyed areas (see clause X.X), in which case soundings and depth contours may be omitted from the area,

Spoil grounds, dredging areas (see S-4 – B-446)Spoil grounds are areas set aside, clear of shipping channels and in deep water where possible, for the disposal of material (spoil) generally obtained by dredging. Their significance to the mariner is that very large quantities of material may be dumped, decreasing the depth of water available.Extraction (or dredging) areas are those areas where a concentration of dredging vessels may be encountered, taking up sand or shingle to be brought ashore (for example for construction purposes). Their significance is primarily as a collision hazard, although they also indicate the likelihood of finding a greater depth of water than charted. Channels dredged to provide an adequate depth of water for navigation are “dredged areas”, not to be confused with “dredging areas”.If it is required to encode a spoil ground, it must be done using a **Dumping Ground** feature, with attribute **category of dumping ground** = *5* (spoil ground).If it is required to encode a dredging area, it must be done using a **Restricted Area Navigational** feature (see clause X.X) or **Restricted Area Regulatory** feature (see clause X.X), with attribute **category of restricted area** = *21* (dredging area). An area in which seabed material (for example sand, shingle) is being extracted for purposes such as construction must be encoded, where required, using the feature **Offshore Production Area** (see clause X.X), with attribute **category of production area** = *13* (seabed material extraction area).Distinction: Dredged area. |

## Military practice area

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| IHO Definition: **MILITARY PRACTICE AREA**. An area within which naval, military or aerial exercises are carried out. Also called an exercise area. (Adapted from IHO Dictionary – S-32). |
| **S-101 Geo Feature: Military practice area (MIPARE)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Category of military practice area  | (CATMPA) | 2 : torpedo exercise area3 : submarine exercise area4 : firing danger area5 : mine-laying practice area6 : small arms firing range | EN | 0,\* |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Nationality  | (NATION) |  | TE | 0,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Restriction | (RESTRN) | 1 : anchoring prohibited2 : anchoring restricted3 : fishing prohibited4 : fishing restricted5 : trawling prohibited6 : trawling restricted7 : entry prohibited8 : entry restricted9 : dredging prohibited10 : dredging restricted11 : diving prohibited12 : diving restricted13 : no wake15 : construction prohibited16 : discharging prohibited17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted22 : removal of historical artefacts prohibited23 : cargo transhipment (lightening) prohibited24 : dragging prohibited25 : stopping prohibited26 : landing prohibited27 : speed restricted39 : swimming prohibited | EN | 0,\* |
| Status  | (STATUS) | 1 : permanent2 : occasional5 : periodic/intermittent6 : reserved7 : temporary16 : watched17 : un-watched | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 30-33Military practice areas (see S-4 – B-441.1-6)Military practice (or exercise) areas at sea are of various types and may be classified as follows with regard to their significance for the mariner:* Firing danger areas, sometimes called firing practice areas; that is, permanent or temporary ranges, including bombing, torpedo and missile ranges.
* Mine-laying practice (and counter-measures) areas.
* Submarine exercise areas.
* Other exercise areas.

Some degree of restrictionon navigation and other rights may be implied by the encoding of military practice areas. There may be varying interpretations of the validity of the restrictions and possible infringement of the rights of innocent passage through territorial waters and elsewhere. Where it is thought desirable to depict such areas, even though clear range procedure may be observed, or the areas appear to be a derogation of the freedom of the seas, mariners should be informed (not necessarily on ENCs) that publication of the details of a law or regulation is solely for the safety and convenience of shipping and implies no recognition of the international validity of the law or regulation. By this means infringements are not condoned but the mariner receives a warning which may be necessary for their safety.If it is required to encode a military practice area, it must be done using the feature **Military Practice Area**.Remarks:* Submarine exercise areas should generally not be encoded where submarines exercise over wide areas which it would not be practicable to depict, and over which cautions (to keep a good look out for them) are unlikely to be effective. They may, however, be encoded where they occur in or near major shipping lanes or port approaches.
* Firing danger areas at seaare frequently marked by IALA special buoys sometimes laid around the perimeter of the area and/or by specially erected lights, beacons and targets. If required, all such features which could assist the navigator in identifying their position, or could be a hazard, must be encoded in the normal way,
* The existence of mine laying (and counter-measures/clearance) practice areas implies the possibility of unexploded mines or depth charges on the sea floor, and also the presence of harmless practice mines.

Distinction: Caution area; restricted area navigational; restricted area regulatory; submarine transit lane. |

## Administration area

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| IHO Definition:  **ADMINISTRATION AREA**. A defined area within which a jurisdiction applies. It may or may not be named. |
| **S-101 Geo Feature: Administration area (ADMARE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| In dispute |  |  | BO | 0,1 |
| Jurisdiction | (JRSDTN) | 1 : international2 : national3 : national sub-division | EN | 1,1 |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Nationality  | (NATION) |  | TE | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 40, 41International and national territories (see S-4 – B-440.1 and B-440.3)International maritime boundariesare those which have been established by agreement between adjacent or opposite States. Boundaries are sometimes negotiated on the basis of the equidistance or “median” line principle. For various reasons, however, agreed boundaries even when negotiated on this principle are seldom true median lines. Navigationally, international boundaries may vary in their significance over different parts of their lengths. Inshore, they may represent the delimitation of Territorial Seas of two states or “internal waters”, (for example within bay closing lines or straight baseline systems). Offshore, they may represent Exclusive Economic Zone and/or Continental Shelf boundaries.If it is required to encode a named international or national territory, it must be done using the feature **Administration Area**.Remarks:* International land boundaries should be encoded, at least in the vicinity of coasts.

Distinction: Contiguous Zone; Continental Shelf area; Exclusive Economic Zone; fishery zone; land region; Territorial Sea area; vessel traffic service area. |

## Cargo transhipment area

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| IHO Definition: **CARGO TRANSHIPMENT AREA**. An area designated for the transfer of cargo from one vessel to another, usually to reduce the draught of the larger vessel. Also called lightening or cargo transfer area. (Adapted from IHO Dictionary – S-32). |
| **S-101 Geo Feature: Cargo transhipment area (CTSARE)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Restriction | (RESTRN) | 2 : anchoring restricted3 : fishing prohibited4 : fishing restricted5 : trawling prohibited6 : trawling restricted8 : entry restricted9 : dredging prohibited10 : dredging restricted11 : diving prohibited12 : diving restricted13 : no wake15 : construction prohibited16 : discharging prohibited17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted22 : removal of historical artefacts prohibited24 : dragging prohibited27 : speed restricted39 : swimming prohibited | EN | 0,\* |
| Status  | (STATUS) | 1 : permanent2 : occasional3 : recommended5 : periodic/intermittent6 : reserved7 : temporary9 : mandatory | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 64Cargo transhipment areas (see S-4 – B-449.4)Areas generally outside port limits may be specifically designated as suitable for the transhipment of oil or other materials from large ships to smaller vessels. The areas selected are relatively sheltered locations and lie off main shipping routes. As the purpose of transhipment is usually to reduce the draught of the larger vessel to allow it to proceed to port, the operation is often known as “lightening” and the areas may be known as “lightening areas” or “cargo transfer areas”.If it is required to encode a cargo transhipment area, it must be done using the feature **Cargo Transhipment Area**.Remarks:* The encoding of cargo transhipment areas should be adequate to warn other vessels of the likelihood of encountering ships restricted in their ability to manoeuvre. Regulations governing the use of such areas should be encoded using the attribute **restriction** or an associated instance of the information class **Nautical Information** (see clause X.X), complex attribute **information**.

Distinction: Dock area; harbour area (administrative); harbour facility. |

## Caution area

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| IHO Definition: **CAUTION AREA**. Generally, an area where the mariner has to be made aware of circumstances influencing the safety of navigation. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.33, November 2000). |
| **S-101 Geo Feature: Caution area (CTNARE)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Condition | (CONDTN) | 1 : under construction3 : under reclamation5 : planned construction | EN | 0,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Reported date | *(SORDAT)* | ISO 8601: 2004 | TD | 0,1 |
| Status  | (STATUS) | 5 : periodic/intermittent7 : temporary | EN | 0,1 |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: Caution areas (see S-4 – B-242)If it is required to identify an area in which the mariner must be aware of circumstances influencing the safety of navigation (for example an area of continually changing depths), and which cannot be encoded using other feature types, it must be done using the feature **Caution Area**. This feature may be required to identify a danger, a risk, a rule or advice that is not directly related to a particular feature.Remarks:* To encode the relevant cautionary information, an instance of the information class **Nautical Information** (see clause X.X) must be associated to the **Caution Area**.
* If the information applies to a specific area the **Caution Area** feature should cover only that area.
* If the information to be encoded is spatially linear, this should be encoded using a “very narrow” **Caution Area** feature of type area (approximately 0·2mm wide at the maximum display scale of the ENC data) similar to the method for encoding linear maritime jurisdiction areas (see clause X.X).
* Information which may be of use to the mariner, but is not significant to safe navigation and cannot be encoded using other feature types, should be encoded using an **Information Area** feature (see clause X.X), and using an associated instance of the information class **Nautical Information** (see clause X.X), complex attribute **information** (see clause X.X). This encoding is intended to reduce the number of alarms or indications generated in the ECDIS due to the overuse of **Caution Area** features.
* Notes should be kept to a minimum and be as concise as is compatible with accuracy and intelligibility. Hydrographic terminology (jargon) should be avoided, giving preference to easily understood words, for example “depths” rather than “bathymetry”.
* In order to ensure correct ECDIS display, **Caution Area** features of type surface should not share the geometry of features such as **Depth Contour** and other features with higher ECDIS display priorities, as the **Caution Area** will appear to be “open ended”, which may confuse the mariner. Where this occurs, the edge of the **Caution Area** should be extended outward to clear the “shared” edge, sufficient to avoid “duplicate geometry” validation errors (that is, about 0.2mm at the maximum display scale for the ENC data).

Distinction: Collision regulations limit; depth discontinuity; information area; obstruction; underwater/awash rock; unsurveyed area; wreck. |
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| **Feature/Information associations** |
| **Type** | **Association Name** | **Association Ends** |
| **Class** | **Role** | **Mult** | **Class** | **Role** | **Mult** |
| Asso | Additional Information | **Caution Area** | Provides information | 1,\* | **Nautical Information**  | Information provided for | 0,1 |
| Asso | Caution Area Association | **Caution Area** | Consists of | 1,\* | **Archipelagic Sea Lane**, **Traffic Separation Scheme**  | Component of | 0,1 |

## Information area

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| IHO Definition: **INFORMATION AREA**. An area for which general information regarding navigation, but not directly related to safety of navigation, is available. |
| **S-101 Geo Feature: Information area** |
| **Primitives: Point, Curve, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Reported date | *(SORDAT)* | ISO 8601: 2004 | TD | 0,1 |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: Information areas (see S-4 – B-XXX)If it is required to encode information which may be of use to the mariner, but is not significant to safety of navigation and cannot be encoded using existing features, it must be done using the feature **Information Area**.Remarks:* The feature **Information Area** encodes information which the Producing Authority determines is relevant to the mariner, but does not warrant the triggering of ECDIS alarms through the encoding of **Caution Area** features.
* To encode the relevant information, an instance of the information class **Nautical Information** (see clause X.X) must be associated to the **Information Area**.
* If the information applies to a specific area the **Information Area** feature should cover only that area.
* If the information to be encoded is spatially linear, this should be encoded using a “very narrow” **Information Area** feature of type surface (approximately 0·2mm wide at the maximum display scale of the ENC data) similar to the method for encoding linear maritime jurisdiction areas (see clause X.X).

Distinction: Caution area; collision regulations limit; depth discontinuity; obstruction; underwater/awash rock; unsurveyed area; wreck. |
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| **Feature/Information associations** |
| **Type** | **Association Name** | **Association Ends** |
| **Class** | **Role** | **Mult** | **Class** | **Role** | **Mult** |
| Asso | Additional Information | **Information Area** | Provides information | 1,\* | **Nautical Information**  | Information provided for | 0,1 |

##  Contiguous Zone

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| IHO Definition: **CONTIGUOUS ZONE**. A zone contiguous to a coastal State’s Territorial Sea, which may not extend beyond 24 nautical miles from the baselines from which the breadth of the Territorial Sea is measured. The coastal state may exercise certain control in this zone subject to the provisions of International Law. (IHO Dictionary – S-32). |
| **S-101 Geo Feature: Contiguous zone (CONZNE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| In dispute |  |  | BO | 0,1 |
| Nationality  | (NATION) |  | TE | 1,\* |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 44Contiguous Zones (see S-4 – B-440.6)The Contiguous Zoneis a zone adjacent to the Territorial Sea where the coastal state may exercise the control necessary to prevent or punish infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or Territorial Sea. Under UNCLOS, the outer limits of this zone may not extend beyond 24 nautical miles measured from the Territorial Sea Baselines.If it is required to encode the Contiguous Zone, it must be done using the feature **Contiguous Zone**.Remarks:* For guidance regarding the encoding of areas in which the maritime jurisdiction between two or more Coastal States are in dispute, see clause X.X.

Distinction: Administrative area; Continental Shelf area; Exclusive Economic Zone; fishery zone; Territorial Sea area. |

## Continental Shelf area

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| IHO Definition: **CONTINENTAL SHELF AREA**. The Continental Shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its Territorial Sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the Territorial Sea is measured where the outer edge of the continental margin does not extend out to that distance. (IHO Publication C-51). |
| **S-101 Geo Feature: Continental shelf area (COSARE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Nationality  | (NATION) |  | TE | 1,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 46Continental Shelf (see S-4 – B-440.8)The delineation of the Continental Shelf beyond 200 nautical miles from the Territorial Sea baselines is complex. Details are given in UNCLOS (see IHO Publication C-51). The coastal State exercises sovereign rights over the Continental Shelf for the purpose of exploring it and exploiting its natural resources. Complex procedures exist within UNCLOS for the establishment of the limits of the Continental Shelf. Where these procedures have been followed the area should be encoded on suitable maximum display scale ENC data.If it is required to encode the Continental Shelf, it must be done using the feature **Continental Shelf Area**.Remarks:* No remarks.

Distinction: Administrative area; Contiguous Zone; Exclusive Economic Zone; fishery zone; Territorial Sea area. |

## Custom zone

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| IHO Definition: **CUSTOM ZONE**. The area within which national custom regulations are in force. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.46, November 2000). |
| **S-101 Geo Feature: Custom zone (CUSZNE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Nationality  | (NATION) |  | TE | 1,1 |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 48Custom Zones (see S-4 – B-440.2)If it is required to encode a custom zone, it must be done using the feature **Custom Zone**.Custom zones,where details are provided by a regulatory authority, should be encoded on the largest maximum display scale ENC data covering the area.Remarks:* No remarks.

Distinction: Check point; free port area. |

## Exclusive Economic Zone

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| IHO Definition: **EXCLUSIVE ECONOMIC ZONE**. An area, not exceeding 200 nautical miles from the baselines from which the breadth of the Territorial Sea is measured, subject to a specific legal regime established in the United Nations Convention on the Law of the Sea under which the coastal state has certain rights and jurisdiction. (IHO Dictionary – S-32). |
| **S-101 Geo Feature: Exclusive economic zone (EXEZNE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| In dispute |  |  | BO | 0,1 |
| Nationality  | (NATION) |  | TE | 1,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 47Exclusive Economic Zones (see S-4 – B-440.9)In the Exclusive Economic Zone, the coastal State has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the Zone, such as the production of energy from the water, currents and winds.If it is required to encode an Exclusive Economic Zone (EEZ), it must be done using the feature **Exclusive Economic Zone**.Remarks:* For guidance regarding the encoding of areas in which the maritime jurisdiction between two or more Coastal States are in dispute, see clause X.X.

Distinction: Administrative area; Contiguous Zone; Continental Shelf area; fishery zone; Territorial Sea area. |

## Fishery zone

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| IHO Definition: **FISHERY ZONE**. The offshore zone in which exclusive fishing rights and management are held by the coastal nation. (IHO Dictionary – S-32). |
| **S-101 Geo Feature: Fishery zone (FSHZNE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Nationality  | (NATION) |  | TE | 1,1 |
| Status  | (STATUS) | 1 : permanent5 : periodic/intermittent6 : reserved7 : temporary | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 45Fishery zones (see S-4 – B-440.7)A fishery zoneis an area inside and beyond the Territorial Sea where a coastal State proclaims that it alone may regulate fishing. Where States have permitted others to fish in parts of the area, it may be desirable to encode the area of both the full area and the area of special concessionary rights. In some instances, claims are described as “conservation zones”; for practical purposes these may be classed with fishery zones since their intended function is to institute fishery conservation measures. Most of the fishery zone claims are limited by fixed distance (200 nautical miles in some cases) from the Territorial Sea baselines.If it is required to encode a fishery zone, it must be done using the feature **Fishery Zone**.Remarks:* Fishery zones commonly coincide with other national jurisdiction areas such as Continental Shelf and Exclusive Economic Zone. Where this occurs, Producing Authorities may choose to omit the **Fishery Zone** from the area covered by these other national jurisdiction areas, as the fact that fishing regulations apply in these areas is implicit.
* An indication of the fishery zone limit (for example 6 mile, 12 mile) may be encoded using the complex attribute **feature name**.

Distinction: Administrative area; Contiguous Zone; Continental Shelf area; Exclusive Economic Zone; fishing ground; restricted area navigational; restricted area regulatory; Territorial Sea area. |

## Fishing ground

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| IHO Definition: **FISHING GROUND**. A water area in which fishing frequently take place. (Adapted from IHO Dictionary – S-32). |
| **S-101 Geo Feature: Fishing ground (FSHGRD)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Restriction | (RESTRN) | 1 : anchoring prohibited2 : anchoring restricted4 : fishing restricted5 : trawling prohibited6 : trawling restricted8 : entry restricted9 : dredging prohibited10 : dredging restricted11 : diving prohibited12 : diving restricted15 : construction prohibited16 : discharging prohibited17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted22 : removal of historical artefacts prohibited23 : cargo transhipment (lightening) prohibited24 : dragging prohibited25 : stopping prohibited26 : landing prohibited27 : speed restricted39 : swimming prohibited | EN | 0,\* |
| Status  | (STATUS) | 1 : permanent5 : periodic/intermittent6 : reserved7 : temporary8 : private14 : public16 : watched17 : un-watched28 : buoyed | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: Fishing groundsIf it is required to encode a fishing ground, it must be done using the feature **Fishing Ground**.Remarks:* No remarks.

Distinction: Fishery zone; marine farm/culture. |

## Free port area

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| IHO Definition: **FREE PORT AREA**. A port where certain import and export duties are waived (unless goods pass into the country) to facilitate reshipment to other countries. (IHO Dictionary – S-32). |
| **S-101 Geo Feature: Free port area (FRPARE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Status  | (STATUS) | 1 : permanent6 : reserved8 : private14 : public | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: Free port areasIf it is required to encode a free port area, it must be done using the feature **Free Port Area**.Remarks:* No remarks.

Distinction: Custom zone; production/storage area. |

## Harbour area (administrative)

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| IHO Definition: **HARBOUR AREA**. The area over which a harbour authority has jurisdiction. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.80, November 2000). |
| **S-101 Geo Feature: Harbour area (administrative) (HRBARE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Status  | (STATUS) | 1 : permanent4 : not in use6 : reserved8 : private14 : public | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 49Administrative harbour areas (see S-4 – B-430.1)Administrative harbour areasmust be shown on at least the largest maximum display scale ENC datasets, where possible, to assist mariners in complying with harbour regulations.If it is required to encode an administrative harbour area, it must be done using the feature **Harbour Area (Administrative)**.Remarks:* If it is required to encode a named harbour area over which there is no jurisdictional authority, it must be done using the feature **Sea Area/Named Water Area** (see clause X.X).
* A masked line may be used to suppress the symbolisation of the boundary, where such symbolisation is considered inappropriate.

Distinction: Dock area; sea area/named water area. |

## Log pond

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| IHO Definition: **LOG POND**. A maritime area enclosed with connected floating timbers used as a staging area for sawn logs. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.102, November 2000). |
| **S-101 Geo Feature: Log pond (LOGPON)** |
| **Primitives: Point, Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Status  | (STATUS) | 1 : permanent2 : occasional5 : periodic/intermittent6 : reserved7 : temporary8 : private | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 61Log ponds (see S-4 – B-449.2)If it is required to encode a log pond (also known as booming ground), it must be done using the feature **Log Pond**.Remarks:* Seasonal log ponds should be encoded using the complex attribute **periodic date range**.
* It is not required to separately encode any posts, piles or other log pond barrier supports.

Distinction:  |

## Oil barrier

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| IHO Definition: **OIL BARRIER**. A floating barrier to stop and contain the spread of oil on a water body surface. (Defence Geospatial Information Working Group; Feature Data Dictionary Register, 2010). |
| **S-101 Geo Feature: Oil barrier (OILBAR)** |
| **Primitives: Curve** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Category of oil barrier  | (CATOLB) | 1 : oil retention (high pressure pipe)2 : floating oil barrier | EN | 0,1 |
| Condition | (CONDTN) | 1 : under construction2 : ruined5 : planned construction | EN | 0,1 |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Reported date | *(SORDAT)* | ISO 8601: 2004 | TD | 0,1 |
| Status  | (STATUS) | 1 : permanent2 : occasional4 : not in use5 : periodic/intermittent7 : temporary8 : private | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: F 29Oil barriers (see S-4 – B-449.2)If it is required to encode an oil barrier, it must be done using the feature **Oil Barrier**.Remarks:* No remarks.

Distinction:  |

## Straight Territorial Sea Baseline

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| IHO Definition: **STRAIGHT TERRITORIAL SEA BASELINE**. A baseline is the line from which the outer limits of the Territorial Sea and certain other outer limits are measured. (IHO Dictionary – S-32).Straight baselines are a system of straight lines joining specified or discrete points on the low-water line, usually known as straight baseline turning points. (IHO Dictionary – S-32). |
| **S-101 Geo Feature: Straight territorial sea baseline (STSLNE)** |
| **Primitives: Curve** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Nationality  | (NATION) |  | TE | 1,1 |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 42Straight Territorial Sea Baselines (see S-4 – B-440.4)A Territorial Sea is delimited by:* Territorial Sea Baselines (drying lines);
* Straight Territorial Sea Baselines;
* International maritime boundaries (see clause X.X); and
* Seaward limits of Territorial Seas (see clause X.X).

The term “Baseline” refers to the line from which the breadth of the Territorial Sea, the outer limits of the Contiguous Zone, the Exclusive Economic Zone and, in some cases, the Continental Shelf are measured. It is also the dividing line between internal watersand territorial seas. Internal waters comprise all areas of the sea on the landward side of the Territorial Sea Baselines, as well as inland waters including rivers, lakes, etc. The normal baselineis the low water line (which is not defined any more precisely by UNCLOS) of the mainland, islands, or low tide elevations, as depicted on large scale charts officially recognised by the coastal State; they therefore do not require depiction in ENCs. Features which are naturally-formed and dry at low water (for example rocks, reefs, sand banks) may be considered low-tide elevations and included in the baseline (details are given in UNCLOS - see IHO publication C-51).A straight baselinemay be used:* as a closing line across the mouth or estuary of a river;
* as a closing line across the mouth of a juridical bay or a historical bay;
* as part of a system of Straight Territorial Sea Baselines, for example to connect seaward points on a deeply indented coastline, a coastline that is fringed with islands, around unstable coastlines; or
* as an archipelagic baseline.

If it is required to encode a Straight Territorial Sea Baseline, it must be done using the feature **Straight Territorial Sea Baseline**.Remarks:* No remarks.

Distinction:  |

## Territorial Sea area

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| IHO Definition: **TERRITORIAL SEA AREA**. A belt of water of a defined breadth but not exceeding 12 nautical miles measured seaward from the Territorial Sea Baseline. (IHO Dictionary – S-32). |
| **S-101 Geo Feature: Territorial sea area (TESARE)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| In dispute |  |  | BO | 0,1 |
| Nationality  | (NATION) |  | TE | 1,\* |
| Restriction | (RESTRN) | 2 : anchoring restricted4 : fishing restricted6 : trawling restricted8 : entry restricted9 : dredging prohibited10 : dredging restricted12 : diving restricted17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted22 : removal of historical artefacts prohibited23 : cargo transhipment (lightening) prohibited24 : dragging prohibited27 : speed restricted | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 43Territorial Seas (see S-4 – B-440.5)A Territorial Sea is delimited by:* Territorial Sea Baselines (drying lines);
* Straight Territorial Sea Baselines (see clause X.X);
* International maritime boundaries (see clause X.X); and
* Seaward limits of Territorial Seas.

Within the Territorial Sea, a coastal State exercises sovereignty subject to rules of international law, including the right of innocent passage for foreign ships.If it is required to encode a Territorial Sea area, it must be done using the feature **Territorial Sea Area**.Remarks:* For guidance regarding the encoding of areas in which the maritime jurisdiction between two or more Coastal States are in dispute, see clause X.X.

Distinction: Administrative area; Contiguous Zone; Continental Shelf area; Exclusive Economic Zone; fishery zone; restricted area navigational; restricted area regulatory. |

## Submarine transit lane

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| IHO Definition: **SUBMARINE TRANSIT LANE**. A lane where submarines may navigate under water or at the surface. (IHO Dictionary – S-32). |
| **S-101 Geo Feature: Submarine transit lane (SUBTLN)** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Nationality  | (NATION) |  | TE | 0,1 |
| Restriction | (RESTRN) | 1 : anchoring prohibited2 : anchoring restricted3 : fishing prohibited4 : fishing restricted5 : trawling prohibited6 : trawling restricted7 : entry prohibited8 : entry restricted9 : dredging prohibited10 : dredging restricted11 : diving prohibited12 : diving restricted13 : no wake16 : discharging prohibited17 : discharging restricted18 : industrial or mineral exploration/development prohibited19 : industrial or mineral exploration/development restricted20 : drilling prohibited21 : drilling restricted22 : removal of historical artefacts prohibited23 : cargo transhipment (lightening) prohibited24 : dragging prohibited25 : stopping prohibited27 : speed restricted | EN | 0,\* |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: N 33Submarine transit lanes (see S-4 – B-441.5)Submarine transit lanes should not generally be encoded because submarines exercise over wide areas which it would not be practicable to depict, and over which cautions (to keep a good look out for them) are unlikely to be effective. They may, however, be encoded where they occur in or near major shipping lanes or port approaches.If it is required to encode a submarine transit lane, it must be done using the feature **Submarine Transit Lane**.Remarks:* No remarks.

Distinction: Military practice area. |

## Pilotage district

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| IHO Definition: **PILOTAGE DISTRICT**. An area within which a pilotage direction exists. Such directions are regulated by a competent harbour authority which dictates circumstances under which they apply. (UK Pilotage Act 1987). |
| **S-101 Geo Feature: Pilotage district** |
| **Primitives: Surface** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Communication channel | (COMCHA) |  | TE | 0,\* |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: Pilotage districts (see S-4 – B-XXX)If it is required to encode the area within which regulations regarding pilotage apply it should be done using the feature **Pilotage District**.Remarks:* To encode the relevant regulations, an instance of the information class **Nautical Information** (see clause X.X) must be associated to the **Pilotage District**.
* Where the limit of pilotage regulations are coincident with harbour or port limits it is not required to encode a **Pilotage District** feature.
* The relationship between the pilotage district and any associated pilot boarding places should be encoded using the feature association **Pilotage District Association** (see clause X.X).

Distinction: Pilot boarding place. |
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| **Feature/Information associations** |
| **Type** | **Association Name** | **Association Ends** |
| **Class** | **Role** | **Mult** | **Class** | **Role** | **Mult** |
| Asso | Pilotage district association | **Pilotage District** | Component of | 0,1 | **Pilot Boarding Place** | Consists of | 1,\* |

## Collision regulations limit

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| IHO Definition: **COLLISION REGULATIONS LIMIT**. Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs). The demarcation line between inland navigation rules and international navigation rules. |
| **S-101 Geo Feature: Collision regulations limit** |
| **Primitives: Curve** |
| *Real World* | *Paper Chart Symbol* | *ECDIS Symbol* |
| **S-101 Attribute** | **S-57 Acronym** | **Allowable Encoding Value** | **Type** | **Multiplicity** |
| Feature name  |  |  | C | 0,\* |
|  Display name |  |  | (S) BO | 0,1 |
|  Language |  | ISO 639-3 | (S) TE | 0,1 |
|  Name | *(OBJNAM) (NOBJNM)* |  | (S) TE | 1,1 |
| Fixed date range |  |  | C | 0,1 |
|  Date end | (DATEND) | ISO 8601: 2004 | (S) TD | 0,1 |
|  Date start | (DATSTA) | ISO 8601: 2004 | (S) TD | 0,1 |
| Periodic date range |  |  | C | 0,\* |
|  Date end | *(PEREND)* | ISO 8601: 2004 | (S) TD | 1,1 |
|  Date start | *(PERSTA)* | ISO 8601: 2004 | (S) TD | 1,1 |
| Regulation citation |  |  | TE | 0,1 |
| Scale minimum  | (SCAMIN) | See clause X.X | IN | 0,1 |
| INT 1 Reference: Collision regulations limit (see S-4 – B-XXX)If it is required to encode a collision regulations (COLREGs) demarcation line, it must be done using the feature **Collision Regulations Limit**. Remarks:* If it is required to encode the national regulation citation it must be done using the attribute **regulation citation**.

Distinction: Administrative area. |