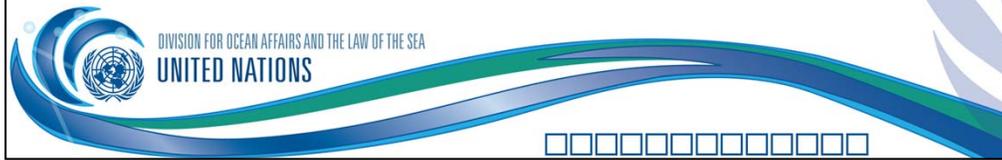


# Division for Ocean Affairs and the Law of the Sea

## Maritime limits and boundaries database

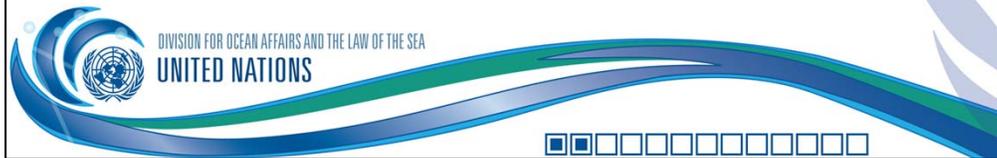
Vladimir Jares, Deputy Director  
Robert Sandev, Senior GIS Officer  
Guillaume Le Sourd, GIS Officer





## ■ Deposit obligation under UNCLOS

- Straight baselines and closing lines of mouths of rivers and of bays (article 16),
- Archipelagic baselines (article 47).
- The outer limits of the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf (articles 16, 75, and 84), including the lines of delimitation.



Coastal States, Parties to UNCLOS, are required to deposit with the Secretary-General of the United Nations charts showing straight baselines and closing lines of mouths of rivers and of bays, archipelagic baselines as well as the outer limits of the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf; or lists of geographical coordinates of points, specifying the geodetic datum may be substituted. Coastal States are also required to give due publicity to all these charts and lists of geographical coordinates.

The outer limit lines of the continental shelf (either up to or beyond 200M) shall also be deposited with the Secretary-General of the International Seabed Authority (article 84).

## ■ Deposit obligation under UNCLOS

### Current situation of deposits:

- 62 coastal States made 102 mainly partial deposits
- The information is in a format of paper charts and/or list of geographic coordinates as required by 1982 UNCLOS

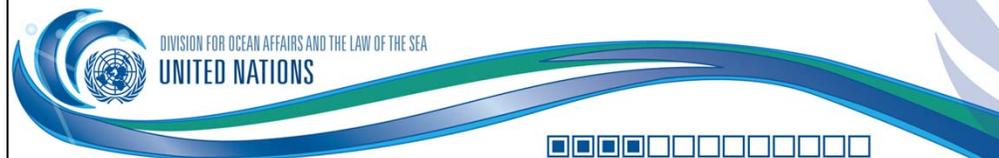


## ■ Due publicity obligation & DOALOS assistance in this regard

### Due publicity:

- Maritime zone notification
- Law of the Sea Circular
- Law of the Sea Bulletin

### Facilities for the custody of charts and lists of geographical coordinates



DOALOS informs States parties to UNCLOS of the deposit of charts and geographical coordinates through a "maritime zone notification". The notifications are subsequently circulated to all States by means of the periodic publication entitled Law of the Sea Information Circular, together with other relevant information concerning the discharge by States of the due publicity obligation.

The texts of the relevant legislation together with illustrative maps are then published in the Law of the Sea Bulletin.

Acting upon the request contained in General Assembly resolution 49/28 of 6 December 1994, the Division established facilities for the custody of charts and lists of geographical coordinates deposited and for the dissemination of such information in order to assist States in complying with their due publicity obligations.

■ Due publicity obligation & DOALOS assistance in this regard

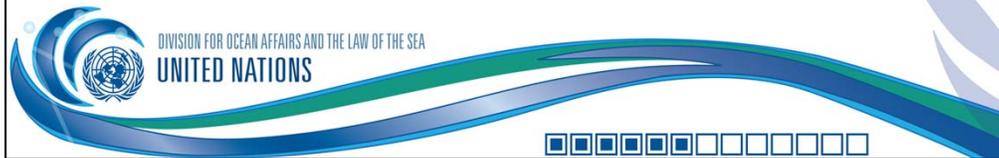
DOALOS website: <http://www.un.org/Depts/los/index.htm>



One component of the aforementioned facilities is the DOALOS' web site where all the information related to deposits is brought into the public domain in a format of electronic files available for download.

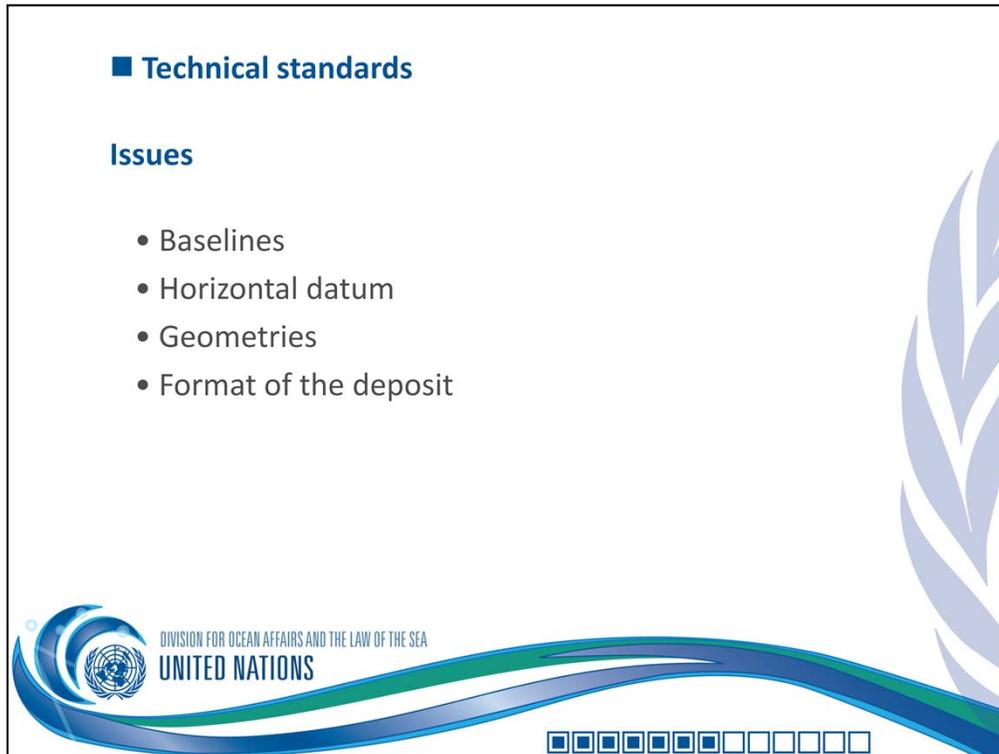
■ Due publicity obligation & DOALOS assistance in this regard

Maritime Limits and Boundaries database



Following the modern trends in the management of information that is geospatial in nature, but also utilizing the internal resources designated primarily to provide services to the Commission on the Limits of the Continental Shelf, DOALOS established a geographic information system titled “Maritime limits and boundaries database”.

The database enables DOALOS to store and process the deposits and produce custom-tailored cartographic outputs through the conversion of conventional maps, charts and lists of geographical coordinates in digital format. The database also helps DOALOS to identify any inconsistencies in the information submitted. The database is connected with the National Legislation/Delimitation Treaties database, which facilitates retrieval of legislation related to maritime boundaries. Currently the database is internal and venues are being explored to make it publicly available over the Internet in the not so distant future.



As with any database design and data entering, DOALOS faced numerous issues. Many of the issues were technical in nature and were successfully resolved by our in-house experts.

However many more issues are associated with the absence of coordinated and standardized approach in describing the outer limits of maritime zones and maritime boundaries. For instance:

- (i) baselines are defined in many different ways around the world;
- (ii) horizontal datum is used to define the size and shape of the earth and the origin and orientation of the coordinate systems used to map the earth. States often deposit geographic information in national horizontal datum, which is then converted into WGS 84 to be added to the geographic information system. The conversion process is often source of a positional error.
- (iii) States used different lines to connect two points, geodetic, loxodrome etc.
- (iv) The deposits are made in different format.

## ■ Technical standards

### GA action

#### A/RES/59/24, 4 February 2005

“6. Requests the Secretary-General to improve the existing Geographic Information System for the deposit by States of charts and geographical coordinates concerning maritime zones, including lines of delimitation, submitted in compliance with the Convention, and to give due publicity thereto, in particular by implementing, in cooperation with relevant international organizations, such as the International Hydrographic Organization, the technical standards for the collection, storage and dissemination of the information deposited, in order to ensure compatibility among the Geographic Information System, electronic nautical charts and other systems developed by these organizations;”



Over the years, it became evident that the previously mentioned issues were also source of concern to the Member States.

As a result, and in order to address the issues The General Assembly, in its resolution A/RES/59/24 of 4 February 2005, requested the Secretary-General to improve the existing geographic information system for the deposit by States of charts and geographical coordinates concerning maritime zones, including lines of delimitation, submitted in compliance with the Convention, and to give due publicity thereto, in particular by implementing, in cooperation with relevant international organizations, such as the International Hydrographic Organization, the technical standards for the collection, storage and dissemination of the information deposited, in order to ensure compatibility among the Geographic Information System, electronic nautical charts and other systems developed by these organizations.

## ■ Technical standards

### Background

- Definition of feature classes describing outer limits of maritime zones and international maritime boundaries in S-100;
- Provision of guidance to States Parties to UNCLOS to, if they wish so, structure their deposit for the purpose of data exchange in compliance with this technical standard;
- Design and maintenance of a GIS database based on this technical standard and enable users to seamlessly download the information and use it in their systems and/or ENCs.
- [http://www.iho.int/mtg\\_docs/com\\_wg/TSMAD/TSMAD19/TSMAD19Docs.htm](http://www.iho.int/mtg_docs/com_wg/TSMAD/TSMAD19/TSMAD19Docs.htm)



DOALOS in collaboration with IHO and its organs:

-The Hydrographic Services and Standards Committee (HSSC)

[http://www.iho.int/srv1/index.php?option=com\\_content&view=article&id=405&Itemid=361](http://www.iho.int/srv1/index.php?option=com_content&view=article&id=405&Itemid=361)

-The Transfer Standard Maintenance and Application Development Working Group (TSMAD)

[http://www.iho.int/srv1/index.php?option=com\\_content&view=article&id=406&Itemid=364](http://www.iho.int/srv1/index.php?option=com_content&view=article&id=406&Itemid=364)

It started a project and quickly realized that the existing technical standards, known as product specifications in IHO, do not fully address the outer limits of maritime zones and international boundaries both in terms of definition and in terms of graphical representation on paper and electronic nautical charts. Therefore it was agreed to develop a new technical standard or product specification as per IHO's terminology, on the basis of S-100, IHO's Universal Hydrographic Model, and S-101, IHO's special publication "Electronic Navigational Chart Product Specification". The goals of the project included:

- Development of feature classes (collection of geographic features with the same characteristics ) representing outer limits of maritime zones and international maritime boundaries.
- Provision of guidance to States Parties to UNCLOS to, if they wish so, structure their deposit for the purpose of data exchange in compliance with this technical standard;
- Design and maintenance of a GIS database based on this technical standard, to enable users to seamlessly download the layer and use it in their systems and/or ENCs.
- The resulting draft technical standard could be downloaded at:

[http://www.iho.int/mtg\\_docs/com\\_wg/TSMAD/TSMAD19/TSMAD19Docs.htm](http://www.iho.int/mtg_docs/com_wg/TSMAD/TSMAD19/TSMAD19Docs.htm)

DOALOS database is compliant with the above draft technical standard.

## ■ Technical Standards

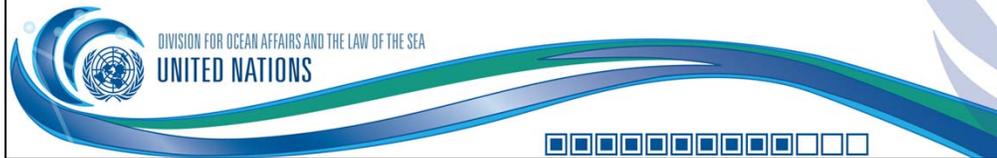
### Current developments

- IHO –S 121 Standard

November 2013 in China: “The [Hydrographic Services and Standards] Committee adopted a standardized method for identifying S-100 based product specifications and endorsed the development of a new standard-IHO –S 121-Maritime Limits and Boundaries Product Specification, to be progressed by Geoscience Australia on behalf of the IHO.”

Source:

[http://www.iho.int/mtg\\_docs/com\\_wg/HSSC/HSSC5/Bulletin\\_report\\_HSSC5.pdf](http://www.iho.int/mtg_docs/com_wg/HSSC/HSSC5/Bulletin_report_HSSC5.pdf) - see second page

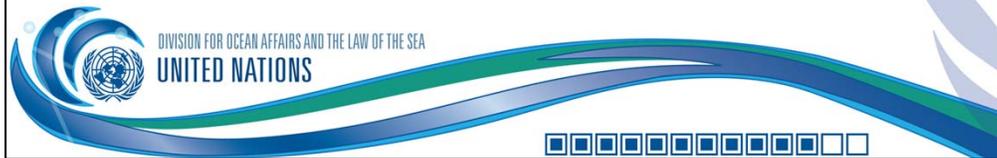


The technical standard issue continued to be a subject of discussion in IHO after the initial activities stemming from the aforementioned resolution. In November 2013 in China, HSSC endorsed the development of the standard-IHO –S 121-Maritime Limits and Boundaries Product Specification to be progressed by Geoscience Australia on behalf of the IHO. Geoscience Australia is aiming at September 2014 as final approval time.

## ■ Technical standard

### Direct benefits:

- Greater and unified accuracy of the location of outer limits of maritime zone;
- Compliance with other internationally adopted standards and consequently easier integration of the information into products such as electronic nautical charts;
- Guidance for capacity building at national level to maintain national information systems on outer limits of maritime zones and maritime boundaries;
- Reliable and authoritative data available to States at no cost;
- Harmonization of national legislation with the provisions of the United Nations Convention on the Law of the Sea.



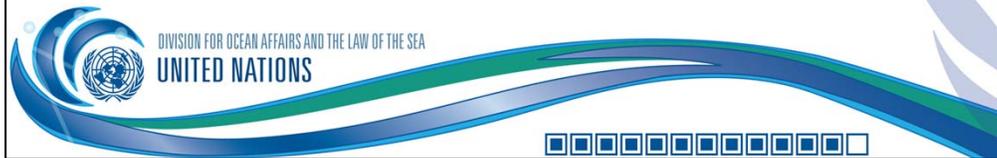
The following are some of the direct benefits States could enjoy by adopting such technical standard:

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- Guidance for capacity building at national level to maintain national information systems on outer limits of maritime zones and maritime boundaries;
- Reliable and authoritative data available to States at no cost;
- Harmonization of national legislation with the provisions of the United Nations Convention on the Law of the Sea.

## ■ Technical standard

### Indirect benefits:

- Increased number of deposits;
- Jurisdictional certainty;
- Additional tool to contribute to the safety of navigation;
- Additional tool to contribute to environmental protection including vulnerable marine ecosystems;
- Improved management of resources.



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*Thank you for your kind attention !*



DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA  
**UNITED NATIONS**

