

Risk Assessment report

Concerning overlaps with TR20022A, TR20022B, TR200021 and TR200031

The following technical risk assessment report refers to the four Turkish ENC cells of scale band 2 (General) TR20022A, TR20022B, TR200021 and TR200031.

1. Geographical location of the overlap

Overlapping areas are not considered being only deep water areas, but also comprise a variety of islands and continental areas, including approaches to Ports/Harbours.

2. The shipping density in the area, Shipping route patterns

Regarding shipping route patterns, the 4 ENCs in discussion occupy areas of great navigational importance for international and domestic shipping as:

- Kaireas Strait (Evvoia I. – Andros I.),
- Kasos Strait (Kriti I. – Kasos I.) and Karpathos Strait (Kasos I. – Rodos I.),
- Kyklades Islands.

The above areas are main navigational routes not only for Greek waters and harbours but for Canakkale (Dardanelles) Strait and the Black Sea.

3. Size of the overlapping data

Regarding to the size of overlapping area, it covers the majority of the Aegean Sea area. To be more specific please see the next table where percentages of the overlaps are presented.

	Greek waters and areas of national jurisdiction	International waters	Turkish waters and areas of national jurisdiction
TR20022A	60.73	26.18	13.09
TR20022B	36.46	39.93	23.61
TR200021	38.14	45.11	16.75
TR200031	25.78	45.13	29.09

4. Differences in the overlapping data relating to the positions of features and the existence/ non-existence of features

Between the Turkish and the Greek ENCs are differences in position of point and area features from 300m to 1100m.

Many features that exist in the Greek ENCs do not appear in the Turkish ones and vice versa. Of course this could be due to differences in our compilation policies.

5. Data in Reference

It is obvious and beyond any doubt that the Turkish ENCs are the equivalents of T-ONHO's paper charts of scale 1:300000. That means that they were not compiled from raw hydrographic data, a significant part of which of course Turkey does not possess since it is Greek waters and areas (please check table in par. 3 above).

The M_QUAL objects in the Turkish ENCs have a CATZOC with value B assigned. The requirements for using B are:

- a. Position Accuracy: $\pm 50m$

- b. Depth Accuracy: $\pm (1+2\% \text{depth})$ meters
- c. Seafloor Coverage: Full area search not achieved; uncharted features, hazardous to surface navigation are not expected but may exist.
- d. Typical Survey Characteristics: Controlled, systematic survey achieving similar depth but lesser position accuracies than ZOC A2, using a modern survey echo sounder, but no sonar or mechanical sweep system.

The above specifications may apply to those ENC's only if T-ONHO had surveyed those areas by their own means something that it is not true, since Turkey has not been given such permission from Greece.

Moreover and most important, for the above reason, Turkey will not be able to provide updates for those ENC's due to the lack of raw data that will prevent proper updating of these ENC's. In the case under discussion, Turkey, according to Article 17 of UNCLOS Convention has no right to survey the territorial waters of Greece. As a consequence, S-57 data that are not updated are not considered as ENC's. This means that any ECDIS with these ENC's loaded will be degraded to ECS.

6. Conclusions

At the back of the above we come to the following conclusions:

- a. On the above overlapping areas, harbour approaching areas are included.
- b. The T-ONHO ENC's include major and important shipping route patterns, international and domestic.
- c. There is large overlapping area by all T-ONHO ENC's where, with the exception of TR200031, the Greek areas charted are considerably larger than the Turkish areas. In cell TR200031 the Turkish areas are larger by only 5%.
- d. Many differences in the overlapping data are considered to be significant.
- f. With no updating abilities, those products can become dangerous to navigation and definitely the Greek authorities will not allow vessels navigating in Greek waters to carry these ENC's.
- g. The Turkish ENC's are considered being at "High Risk Level".